

SD Times

• SOFTWARE DEVELOPMENT

The Industry Newspaper for Software Development Managers

FEBRUARY 1, 2002

ISSUE NO. 047

Sybase Unveils Platform
For Development 3

IBM Gives
Web Services a Hand 3

Palm on BeOS:
Access Denied 4

Start-Up Avinon
Partners With Microsoft 5

WRQ Enhances
Integration Broker 7

Wise Installs .NET,
64-Bit Applications 7

Breeze Factor Rebrands,
Updates Data-Binding Tool 8

TIBCO to Acquire Talarian
For \$115 Million 8

TeamShare Gets
Interactive With Mercury 10

.NET to Be Unveiled
At VSLive 10

OMG Tackles Process
Management 10

Zero G Automates
Update Options 12

Cajun to Be Revealed
At BEA's eWorld 14

Triarc Alliance Offers
Set-Top Box Test Facilities 16

Bluetooth SDK For
Palm OS Goes to Beta 16

Microsoft XPE
'Half-Truths' 17

Wind River Puts Jeode
In JWorks 4.0 17

SPECIAL REPORT:
Microsoft .NET

Power Grab, or
Powerful New Paradigm? 18

A BZ MEDIA PUBLICATION \$7.95

www.sdtimes.com

OMA SEEKS TO CREATE MOBILE CONSISTENCY

Wireless device makers band together to work on interoperability standards

BY EDWARD J. CORREIA

In an effort to increase the potential size of the mobile Internet access market, Nokia Inc. and Japan's NTT DoCoMo have created the Open Mobile Architecture (OMA) initiative, designed to develop consistent ways to browse the Internet, send and receive messages, and execute applications from an assortment of mobile devices, including cell phones and handheld computers.



"Whenever competi-

tors get together to do this kind of work, we do it because we think the market is going to be much bigger because of it," said Doug Heintzman, manager of strategy and standards for IBM Corp.'s Pervasive Computing Division, referring to the OMA initiative, in which IBM also is participating. "Experience has shown us that if we can all agree and standardize on the fundamentals, we can focus on the more interesting

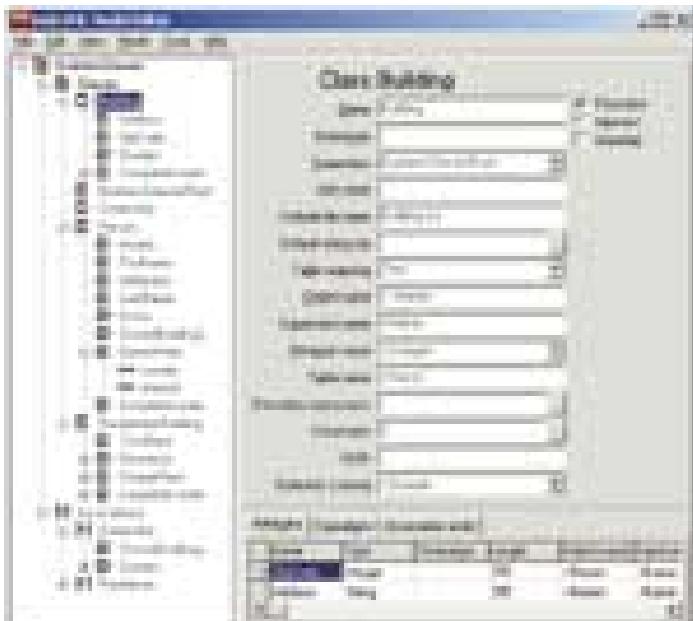
Cooperation will increase the overall market size, says IBM's Heintzman.

► continued on page 16

dows operating system.

In announcing Borland's .NET strategy, Simon Thornhill, general manager of rapid application development solutions, said, "We've been a strong supporter of the Microsoft platform for a very long time. But there

► continued on page 11



Bold lets developers create mappings between UML model and Delphi apps.

Starbase Finds New COO, Seeks Profits

Eliminates 12 percent of staff, seeks other cost-cutting measures

BY DAVID RUBINSTEIN

Jim Harrer faces a tough task. On Jan. 2, Harrer became president and chief operating officer of change management tools provider Starbase Corp., where he must find a way to make profitable a company that, despite triple-digit revenue growth over the past few years, has shown a positive net income in only one of the past 12 quarters.

"My reputation is I run profitable companies that are debt-free," said Harrer, who had been a founder and driving force behind Mustang Software Inc.'s successful sales and marketing

efforts. "That's what shareholders are looking for." Certainly, they're looking for more than the 64-cents-per-share price the stock was languishing at as recently as Jan. 17. For his part, Harrer has hit the ground running. Two days after taking the post, he reduced the company's staff by 33 jobs. Now, Harrer said he's looking at other areas in which to cut costs.

Starbase (www.starbase.com) has tried to grow its business through acquisitions; two—Technology Builders Inc. and World-Web.net—were completed early in 2001 and left the company with a bloated work force in which employees' tasks overlapped. "We were growing at a substantial rate and were doing acquisitions," said Jim



Harrer cut 33 jobs at Starbase two days after becoming COO on Jan. 2.

[price-to-earnings ratio], earnings, operational efficiency...."

The good news for Starbase is that it competes in a \$900 million market—Smith cited Gartner Inc. projections—for change and requirements management tools. Also, the integration of the StarTeam Elite collaborative change management tool system with the Caliber-RM requirements

► continued on page 14

BEA: CAJUN ISN'T J2EE EXTENSION

Company now claims apps will 'run anywhere'

BY CHRISTINA M. PURPI

Backpedaling from comments made to SD Times in December, BEA Systems Inc. now is claiming that developers will be able to create applications on its soon-to-be-released Cajun framework (see story, page 14) and run them on any J2EE-compliant application server. The company also said it is not making proprietary extensions to the framework.

These statements came on the heels of a story in the Jan. 1 issue ("Has J2EE Hit a Fork in the Road?" page 1) that quoted BEA's senior director of product management, Byron Sebastian, as saying the framework will run only on BEA's servers

► continued on page 12

It's 3:00 a.m. And my project
is not going smoothly. It's my
job to make it go smoothly.

It's 3:00 a.m. In 5 hours, I tell
upper management the news.
It's going to be a very long day.

You're responsible for the success of your company's critical business applications. Without the security of stable software products and world-class support, your future may be full of sleepless nights. Next time, choose Rogue Wave® SourcePro™ C++ and get trusted, field-proven components coupled with expert support and services. You'll be secure in the knowledge that your development projects will be delivered on time, on scope and on budget. To find out more about SourcePro C++, visit www.roguewave.com/sleepless.



Sybase Unveils Platform for Development

BY DAVID RUBINSTEIN

Sybase Inc. last week released a new e-business development platform designed to expand the company's product line beyond its traditional database offerings. The new platform, which has not been named by Sybase, includes the company's new Business Process Integration Suite 2.1, the enhanced PowerDesigner 9.0 modeling and code generation tool, and updated Enterprise Portal 2.5.

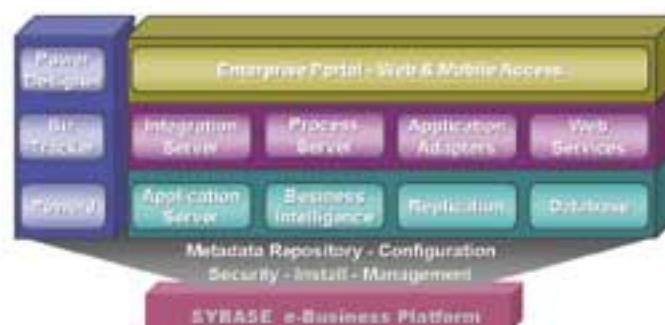
The modular platform will allow companies to integrate their applications and processes through a single, secure portal interface residing on an enterprise-class J2EE-compliant application server, according to Neil McGovern, Sybase's e-Business Division director of business development and strategy. "We wanted to make sure we're clear on what business drivers are out there for our customers," he said.

The linchpin of the new platform is the new BPI Suite,

which combines products acquired when it bought New Era of Networks Inc. in April 2000—Process Server, Biz Tracker, e-Biz Integrator and an XML adapter—with a new Web Services Integrator built upon the company's newly J2EE 1.3-compliant EA Server, according to Bill Jacobs, Sybase's e-Business Division director of business process management and monitoring.

"Sybase was investing heavily in integration products," Jacobs noted. "The average customer buys integration tools and hopes everything works together. We have created what we think is a typical enterprise offering."

PowerDesigner 9.0 now allows developers to model business processes, according to David Dichmann, its product manager. "Users can describe business in business terms that are meaningful to them, in non-technical terms," he said, adding that Sybase has added UML Activity and Component dia-



Sybase has bundled existing tools with new business process integration tools.

grams to the tool, bringing the number of diagrams included to five. The remaining UML diagrams will be included in the next revision, Dichmann indicated. "We're focusing on results-oriented modeling and [object-relational] mapping," he said.

Also new to PowerDesigner 9.0 is the ability to generate Enterprise JavaBeans under the 2.0 specification. When used with Sybase's PowerJ development environment, developers can create and deploy component-based applications to any app server that supports EJB 2.0, Dichmann said, adding that the

tool can be integrated with virtually all Java development environments—users can make a call to command-line-driven IDEs from within PowerDesigner.

Within the BPI Suite, Process Server can take the model of a business process and make sure transactions and applications adhere to that process, Jacobs explained. Biz Tracker enables monitoring and auditing of transactions, while e-Biz Integrator is a routing and data transformation tool. Sitting atop this is the new Web Services Integrator, which Jacobs said supports SOAP, UDDI

application can discover services on a Web server.

The Web Hosting Technology, Sutor said, is "how you get paid. Real-time stock quotes are an example of a Web service for which you'd probably want to be paid. With the Web Hosting Technology, you can do metering, tie in the number of times and the length of time a Web service is invoked, compare it with the contract the user signed and build in an accounting program for billing." The technology enables developers to bring services to a hosted environment, where the different pieces are laid out to support the service. Sutor called the hosting environment "the infrastructure

for supporting Web services. It's adding the extra pieces around Web services so they're not lambs in the wild."

The Web Services Gateway, Sutor said, makes it easier to redirect SOAP messages, or to perform message translation as they pass behind a firewall. The gateway also serves as a way of hooking in a SOAP message handler, he said. "You receive a SOAP message, open it, see what it is, then associate some piece of software to handle that information. You need a message handler for that," Sutor explained.

The toolkit and gateway run on Windows and Linux, while the Web Hosting Technology runs only on Windows. ■

IBM Gives Web Services a Hand

Tools to assist providers with connectivity, turning a profit

BY DAVID RUBINSTEIN

IBM Corp. last month provided a first look at a set of tools that it claims provides all the pieces needed to support a Web service, whether for determining billing, easing access to consumers of the Web service, or merely to monitor activity.

Available for free download on its developer site (www.alphaworks.ibm.com), IBM has released version 3.0 of its Web Services Toolkit as well as two new feature sets: the new so-called Web Hosting Technology, a set of management tools that allow provisioning and metering of Web services without requiring code changes; and a new Web Services Gateway, a way to generalize how Web services actually get invoked via SOAP messages.

IBM's director of e-business standards strategy, Bob Sutor, said, "This is the first end-to-end view of the extra support—such as monitoring, alerts, quality-of-service issues and billing—needed around a Web service that does not require a change in the function-

al Web service. These are first looks. Some standardization will go on."

Sutor said the big news in the Web Services Toolkit 3.0 is that it works with Apache Axis, the open-source project's third generation of Java libraries used to manipulate SOAP messages. Axis, Sutor explained, had its genesis in IBM's SOAP-for-J, which was later turned over to Apache. Also, version 3.0 adds SOAP support for LotusScript, described by Sutor as a BASIC-like lan-

guage. "Inclusion of this is a clear message that we're using Web Services Toolkit on alphaWorks to get early technology into the hands of developers so they can understand it as quickly as possible," Sutor said. "Once developers start using it in real situations, they provide the feedback to help in terms of standardizing these technologies." The toolkit also has been updated to support the new WS-Inspection protocol IBM is developing with Microsoft to define how an

IBM BRINGS CROSSWORLDS INTO FOLD

Chalk up another market grab for IBM Corp., which last month completed its \$129 million acquisition of CrossWorlds Software Inc. Having acquired database manufacturer Informix last year for \$1 billion to gain an immediate leg up in the database market, IBM's purchase of CrossWorlds puts it in a position to offer what it believes is the broadest range of integration products within one product

suite—in this case, the WebSphere portfolio of products.

The CrossWorlds product names will remain unchanged, but they will be positioned as an integral part of IBM's software division, according to Paraic Sweeney, vice president of marketing in IBM's solutions and strategy division.

"The value...the unique technology that attracted us [to CrossWorlds], is the view

that integration is process driven," said Sweeney. "The processes are typically embodied in a number of disparate applications."

Sweeney said that IBM and CrossWorlds have been business partners since 1998, so "there's not a lot of work to do to get going. We're basically ready to rock 'n' roll."

CrossWorlds' integration solutions are based on a hub-and-

spoke model as opposed to point-to-point integration, which IBM does now with its MQSeries messaging middleware, Sweeney pointed out. Templates developed by CrossWorlds for more than 70 pieces of business logic will be folded into IBM's WebSphere integration solution. The templates provide keys to facilitate the understanding of terms, such as "customer" and "financial," in applications that have different definitions for the terms.

—David Rubinstein

Palm on BeOS: Access Denied

Company rejects request to license operating system

BY EDWARD J. CORREIA

Dashing the hopes of a cooperative seeking to continue development of the Be operating system, Palm Inc. has rejected a

request to license its new operating system, but will continue its original plan to weave pieces of the 32-bit BeOS into the next versions of the Palm OS.

BeUnited (www.beunited.org), a nonprofit group that claims to represent thousands of developers, first submitted its proposal to Palm in mid-

September of last year, shortly after Palm (www.palm.com) announced that it would acquire the BeOS. It received no response; according to Palm, the proposal was lost in the mail. A second proposal was sent, according to BeUnited, again with no response.

Frustrated by Palm's silence,

Jace Cavacini, who is part of BeUnited's marketing and strategy team, contacted SD Times in January. "Without any acknowledgement about BeUnited's proposal, we were left to feel somewhat rudely ignored," he said. "Palm already has declared war on Microsoft in the handheld market. I cannot see how the continuation of BeOS by our teams could be anything less than a benefit to Palm; it would give Palm a desktop presence without having to spend anything on it." Palm would not comment directly on BeUnited's allegations.

Palm later acknowledged receipt of the BeUnited proposal, and on Jan. 14 rejected it. In its response, according to BeUnited, Palm cited the limitations of being a small and new company focused on "providing great operating systems and other platform components to the handheld computing and communication device market" as the reason why it could not accept the proposal.

Prior to BeUnited's proposal, which offered no guarantees of income for Palm other than a percentage of license sales, open-source developer Robin Bandy offered Palm \$10 million over 10 years for a license to fork the BeOS, with a promise to return all kernel improvements to Palm. But Palm, which paid \$11 million for the intellectual property, never officially responded to the proposal.

"My proposal was ignored," said Bandy, adding that in a later conversation, Palm CTO Steve Sakoman said that while he thought Bandy's proposal was interesting, "he didn't think that anyone at Palm who makes the decisions would accept it if it didn't involve \$2 million up front," a requirement that effectively killed the deal.

Helmar Rudolph, head of strategy at BeUnited, said Palm's decision was a mistake that will enable the desktop operating system market to continue without competition. "It does appear to many of us that Palm made a careless decision; there is much more at stake than Palm's own future." Rudolph said that BeUnited will now focus on furthering the efforts of OpenBeOS, an open-source project (<http://open-beos.sourceforge.net>) working to recreate the BeOS operating system based on the NewOS kernel being developed by former Be engineer Travis Geiselbrecht. ■

QAcenter[®]

GET A GRIP ON APPLICATION REQUIREMENTS

Rapidly changing market demands and a shortage of experienced developers and testers lead to missed application requirements—a threat to your business objectives. QAcenter captures business, functional and testing requirements so your team is working on the same page, no matter how many changes occur mid-stream.

The result? Your team delivers more reliable apps, faster.

Keep pace with today's requirements traceability trends.

Start by downloading our free white paper at:

www.compuware.com/qacenter

COMPUWARE.

Planning

Developing

Integrating

Testing

Implementing

Managing

Staffing

Start-Up Avinon Partners With Microsoft

NetScenario platform aggregates .NET Web services for business

BY DAVID RUBINSTEIN

A company that began operations only last year finds itself flying high with the announcement last month of a partnership agreement with Microsoft Corp.

Avinon Inc., a San Francisco-based company focused on what it calls "business service" management solutions, has a three-year agreement with Microsoft to deliver business solutions exclusively for the .NET platform. A business service as defined by Avinon (www.avinon.com) is a collection of Web services necessary to complete a specific job function.

"We made a .NET bet and we're going to ride it," said Avinon's vice president of marketing, Dave Ruiz. "We got lucky, because back in March [former Microsoft executive] Paul Maritz introduced us to some folks at Microsoft."

What Avinon offers is NetScenario, an assembly platform for aggregating Web services into business services. Avinon soon will add the ability to further extend these business services into something it calls NetScenario Service Centers, such as an insurance agency providing an area for claims adjusters, or other "discrete business services that organizations want to extend to their membership," Ruiz said. The first of these service centers is targeted at manufacturers in the high-tech sector.

From Microsoft's point of view, the agreement allows the company "to walk in and discuss addressing specific problems, instead of selling the benefits of BizTalk or SQL Server," said Steve Christianson, Microsoft's product manager for .NET integration strategies. "This is a partnership at the highest level."

The NetScenario platform includes a NetScenario Studio, where business services are assembled, built on a NetScenario Business Server foundation. The tool, when used as an add-in to Visual Studio.NET, creates a closed loop of developers using Visual Studio.NET and business analysts working in NetScenario. The Studio tool allows the analysts to send a request to a developer for a Web service necessary for inclusion in a business service,

Ruiz explained. Microsoft's SharePoint Portal Server acts as a built-in deployment channel, he said.

In addition, Ruiz said, an add-in for Borland's JBuilder is in early beta, while Avinon intends to build additional add-

ins for IBM's alphaworks tool kit, Sun's Forte IDE and the Apache open-source development environment. These add-ins will

allow business analysts using NetScenario to communicate with developers creating .NET Web services in those development environments. Among business service solutions, Ruiz listed capabilities for real-time marketing, product and service configurations, and service and support. ■

WHAT IT TAKES TO BE THE BEST

Imaging Solutions for Java, Windows, Unix..

Download our free report
"Understanding Web Enabled Document Display and Management"
www.snowbnd.com/whitepaper.htm

Snowbound Software delivers solutions that fit your team's game plan and make you a winner. We streamline your organization's workflow by Web enabling your company's documents for quick, simple and secure access with any web browser. Snowbound Software enables:

- Physicians and clinics to immediately access hospital records from remote locations
- Engineers, vendors, and customers to examine intricate parts drawings and engineering drawings at any time
- Financial institutions to distribute checks, loan files, and other financial documents over the Web
- Insurance field agents and claims processors to access customer contracts and letters from off-site locations

Snowbound Software's document viewing and management software products include document manipulation applications, Internet/Intranet document repositories, and powerful SDKs for developers.

RasterMaster™ 5.0 for Java- with cross-platform imaging capabilities, it is the most powerful Java imaging SDK available.

RasterMaster™ 10.0- Sophisticated imaging SDK for Windows, Unix, and MAC.

Java Snippets™- Web enable your images in a browser in their native formats.

SnowBatch 2.0®- Batch conversion program for over 70 image formats.

SnowView 10.0®- Image viewer for over 70 image formats.

Storm™- Full Java based client/server image repository solution.



29 Crafts Street, Suite 550 Newton, MA 02458 USA
Phone +1-617-630-9495 Fax +1-617-630-0210
www.snowboundsoftware.com
Email: sales@snowbnd.com

WebSphere software

IBM WebSphere and the ibm.com logo are registered trademarks of International Business Machines Corporation in the United States and other countries. © 2000 IBM Corporation. All rights reserved.

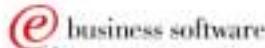


IBM

IN THE PARALLEL UNIVERSE, DEVELOPERS' TASKS WERE COMPLEX. HERE, THE CODERNAUTS FOUND A SIMPLER WAY.

WEBSPHERE FOR OPEN TOOLS

SUPPORTING A TRUE OPEN ENVIRONMENT, BACKED BY INDUSTRY LEADERS.



For free code, visit ibm.com/websphere/ibmtools

IT'S A DIFFERENT KIND OF WORLD.
YOU NEED A DIFFERENT KIND OF SOFTWARE.

WRQ Enhances Integration Broker

Updates to Verastream integrate host, JMS, EDI applications

BY ALAN ZEICHICK

WRQ Inc. has revamped its Verastream family of enterprise integration software to include tools for modeling business processes, new interoperability with the Java Message Service specification, and compatibility with new platforms. All this is key to assembling composite applications that can contain elements from mainframes and minicomputers, client/server and Web-based applications, relational databases and other sources, according to the company.

The key element is the Verastream Integration Broker, which the company says creates and maintains multiple metadata repositories within its own database. Each repository uses adapters to map a particular external source, such as a mainframe application or a Java app server, encompassing both

data and application logic. Developers can use WRQ's tools, which visually script parts of those different repositories together to create composite applications.

New for version 9.0 of the Integration Broker is the ability to incorporate workflow-oriented process management into the composite applications, as well as the ability to communicate with JMS message brokers.

Version 9.0 also now is bundled with a JMS broker licensed from Sonic Software Corp., for those organizations without JMS capability at the present time. Currently, there are 25 direct database adapters available for the Integration Broker, according to WRQ, and application adapters for Siebel, SAP and Baan. There is also a new EDI adapter from Orion Systems

International available, as well as an adapter development kit for enterprises to use when integrating their own applications.

The Integration Broker became available in January, with a starting price of \$64,500 for a single-processor system, ranging up to \$360,000 for a multiple-server system with several application or database adapters. The software can run on AIX, HP-UX, OpenVMS, OS/390, OS/400 or Windows servers.

The OS/390 version is new for version 9.0, according to WRQ, and allows the Integration Broker direct access to CICS, DB2, IMS VSAM and other mainframe applications without requiring 3270 or LU6.2 terminal emulation, or the use of external adapters.

WRQ (www.wrq.com) also updated Verastream Host Integrator, a companion product for the Integration Broker, which adds "screen scraping"-style remote access to mainframe or minicomputer systems, and abstracts it for application developers. Version 4.5, which also is available now, includes a data-stream monitor that can be used to debug emulation scripts. In addition, it can import or export host data from XML messages. Plus, it offers failover/recovery capabilities using LDAP to store session state.

Pricing on the Host Integrator ranges from \$60,000 to \$150,000, depending on the number and type of host platforms being targeted. New for version 4.5 is the ability to run on HP-UX 11 and AIX 4.3.3. ■



Verastream includes a visual designer now capable of diagramming business process workflow for composite applications.

WISE INSTALLS .NET, 64-BIT APPLICATIONS

BY ALAN ZEICHICK

In the wake of Microsoft Corp.'s release of the .NET Framework, Wise Solutions Inc. has upgraded its Wise Installer for Windows to accommodate that platform's new features.

The version 4.0 installer, which was released in mid-January, can now view or edit Microsoft's Windows Installer packages as a logical sequential script, according to the company. It also includes a new utility, MSIDiff, which graphically

shows where two Windows Installer packages differ. MSI is a new installation engine built into Windows 2000 and Windows XP.

The new release can also extract an application's installation details directly from the software project, which the company claims will simplify the process of creating installation script. There is also a professional edition, which can create 64-bit installers and has a new point-and-click interface

for creating installers for MTS/COM+ applications.

In addition, the company says that Wise Installer for Windows can interact with version control systems that support the SCC interface standard, such as Visual SourceSafe and PVCS. The installer also can sign binaries, CAB files and installation scripts with a digital signature. The installer sells for \$349 per developer seat for the standard edition, or \$899 for the professional edition. ■

WebSphere software

SUPPORTERS OF THE NEW OPEN DEVELOPMENT ENVIRONMENT.

ALTOWEB
ASIST
BOWSTREET
BROWSERSOFT, INC.
CAST
COLLABNET
COMMERCEQUEST
COMPUWARE
EMBARCADERO TECHNOLOGIES
HOLOSOFX, INC.
INSTANTIATIONS
INTERWOVEN
LEGACYJ
LOGICLIBRARY, INC.
MACROMEDIA
MERANT
MERCURY INTERACTIVE
MID-COMP INTERNATIONAL
MKS INC.
NEUVIS SOFTWARE
PEREGRINE SYSTEMS
QNX SOFTWARE SYSTEMS
RATIONAL SOFTWARE
RED HAT
SERENA SOFTWARE
SITRAKA
SKYVA INTERNATIONAL
STARBASE
SUSE LINUX
TELELOGIC AB
TOGETHERSOFT
VERSANT
VERSATA, INC.
WILY TECHNOLOGY

e business software

IBM

For free code, visit ibm.com/websphere/ibmtools

News Briefs

COMPANIES

Iona Technologies Inc. and **Total Transaction Management Inc.** have integrated TTM's CtO-Jbean J2EE-compliant adapter with Iona's Orbix E2A application server to allow access to **BEA Systems Inc.**'s Tuxedo and Top End middleware products from Iona's server . . . **Popkin Software Inc.**'s System Architect 8.5 modeling suite now integrates with **Telelogic Inc.**'s DOORS requirements management tool. Users can relate DOORS' requirements to specific model elements, such as classes and use cases, in System Architect, according to the companies . . . **Quickstream Software Inc.** and **Drala Software Inc.** have announced a future integration of QuickStream's e-Content Management Platform, a Web-based application for categorizing and searching XML and HTML content; and Drala's Workflow Engine, an embedded Java component for automating business processes. The companies claim that a combined solution should be finished in the first quarter of 2002 . . . **PrimeLayer Software Inc.** has integrated its PrimeLayer Communications Suite with **Accelerated Technology Inc.**'s Nucleus real-time operating system. The communications suite provides Nucleus with an API layer for tying in network device drivers.

PRODUCTS

Serena Software Inc. has made available the latest version, 3.1, of its **ChangeMan WCM** code and content management tool. New features include international language support, added support for Unix Main Server, Oracle's Metadata Database and IBM's Eclipse development framework, and enhanced templating tools . . . Red Hat Inc. has created versions of **Red Hat Linux 7.2** for two 64-bit processors, Compaq's Alpha and Intel's Itanium. Both use the version 2.4.9 kernel and the ext3 journaling file system. The Itanium version is available now, and the Alpha version is promised in the first quarter . . . Only two weeks after completing version 4.1.0, The PHP Group released **PHP 4.1.1**. Version 4.1 of the scripting language included new input interfaces for improved security, generally improved performance (especially under Windows) versioning support for extensions, and output compression. The 4.1.1 version contains bug fixes . . . Rogue Wave Software Inc. has released edition 3 of its **SourcePro C++** development tool with support for the latest XML Schema specification and SOAP 1.2. Also, platform support has been expanded to include AIX 5L v5.1, HP-UX 11i, Red Hat Linux 7.1 and Windows XP Professional, as well as new database releases DB2 7.2, Informix 2.7, Oracle9i and Sybase 12.5 . . . ConeXL Inc. has released test benches for independent testing of message brokers built to the Java Message Service specifications. **Ptest+** performs multiple publish/subscribe and queuing tests, flow control and latency, among other benchmarks. **Ctest+** tests each line of the JMS 1.0.2 API and profiling of all JMS features, with about 496 tests for pub/sub compliance and 222 tests for queues.

PEOPLE

Programmer's Paradise Inc. has named **Simon Nynens** as CFO. Nynens had served as VP and COO of the company's European operation . . . **Jean-Louis Gasse** resigned his position as CEO of Be Inc. to take the post of president and CEO of Computer Access Technology Corp., a communications protocol company specializing in verification systems . . . Flashline.com Inc. has hired **Mark Woodka** as VP of sales and **Frank McGee** as VP of channel sales . . . Microsoft Corp. has named **Mike Sinneck** as the new VP of worldwide services. He was formerly VP of business operations for IBM Global Services Americas. Sinneck will be charged with integrating Microsoft's Consulting Services and Product Support Services organizations . . . NeoCore Inc., which sells a native XML database, has hired **Eric "Ric" Miles** as its new president and CEO. Miles was most recently executive VP of worldwide operations at FrontRange Solutions Inc., and also worked at PeopleSoft, Vantive, Compaq and Tandem. Company chairman **Tim Dix**, who had also served as CEO, will remain chairman; former president **Chris Brandin** will continue to serve as CTO . . . Rogue Wave Software Inc. has appointed **John Floisand** as its permanent CEO; he has held the position of interim CEO for the past three months. He replaces **Jack Jacobucci**, who was asked to step down. ■

Breeze Factor Rebrands, Updates Data-Binding Tool

BY CHRISTINA M. PURPI

The Breeze Factor LLC has released version 3.0 of Breeze XML Binder, its data-binding solution for Java.

Previously branded under the name XML Studio, the newest release of XML Binder includes the changes implemented in a beta of version 2.5 but never commercially released, along with complete support for the Worldwide Web Consortium's XML Schema Recommendation, Namespaces and DOM.

According to David Dromman, business development manager at Breeze Factor (www.breezefactor.com), data binding is a relatively new technology that makes it easy to process XML data from an object-oriented language.

XML Binder analyzes the structure of an XML document and allows developers to bind the structure to a set of Java classes, Dro-

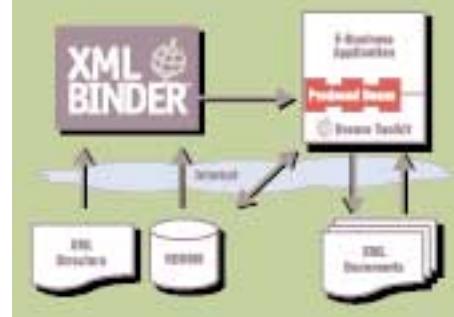
man explained. XML Binder then automatically generates the resulting object models, "which takes away a set of coding," said Dromman, as the tool generates the underlying code. "Most developers write XML applications to a data-binding layer. With this version, you don't need to be XML aware—you just need to be Java aware."

According to Dromman, version 3.0 of XML Binder is tied to Java Architecture for XML Binding (JAXB), Sun's specification on what data-binding

should be, a layer "the industry hasn't written much about yet."

XML Binder now provides an IDE interface that allows for automatic compilation, according to Dromman. "Not only can you edit structure, but you can now load XML structure into the IDE and then generate a Java class...then compile the Java class." Also added to this release is the option of compiling Java source code. XML Binder works with all the major IDEs, such as Borland's JBuilder, IBM's VisualAge, Sun's Forte, Metrowerks' CodeWarrior and WebGain's Studio.

Customers who currently run XML Studio are entitled to a free upgrade, with new customers paying \$395 per development seat—reduced from \$500, Dromman said. The runtime charge of an additional \$10,000 placed on previous versions was eradicated for the 3.0 release, he said. ■



XML Binder generates object models based on XML document structure and binds them to Java classes.

TIBCO to Acquire Talarian for \$115 Million

BY DAVID RUBINSTEIN

In a \$115 million deal expected to close in April, business integration solutions vendor TIBCO Software Inc. will acquire messaging company Talarian Corp. to broaden the scope of its integration messaging offering.

Fred Meyer, chief strategy officer for TIBCO (www.tibco.com), said the purchase was a good fit, as Talarian emphasizes real-time, server-oriented point-to-point messaging while TIBCO emphasizes real-time distributed multicast messaging. The union of the two will help push TIBCO toward one of its goals: "to be the leader in every type of messaging regardless of utilization," Meyer said.

Aside from Talarian's Smart-Sockets product line, Meyer said, TIBCO found Talarian attractive because of several interesting Web transport protocol products, its work following the Pragmatic General Multicast (PGM) specification, and the fact that Talarian has a base of roughly 300 customers.

"This gives us a chance to go back to them with the upper part of the stack, with things like business process manage-

ment, portal...all the things that sit above the messaging layer," Meyer said.

Meyer said he expects application development and integration to become even more closely partnered in the future as more and more people adopt a Web services architecture, which calls for flexibility from loose coupling of components. "Applications will provide core functionality and the integration piece will help

a business analyst string together new processes," Meyer said. "Only IBM and TIBCO have a credible story in this space," he claimed.

While final details have not been worked out, Meyer said the companies are meeting to discuss how Talarian employees can best be integrated into TIBCO's operation. "Our viewpoint is they have a lot of world-class people," Meyer said. "They're the most important asset." ■

Sun Previews New Forte Developer

BY ALAN ZEICHICK

Continuing the market trend toward tying tools to specific vendor platforms, Sun Microsystems Inc. has released a preliminary version of Forte Developer 7, which the company claims is geared to helping programmers incorporate C, C++ and FORTRAN applications into the Java-based Sun Open Network Environment.

According to the company, this is the first version of Forte Developer based on the NetBeans open-source IDE project, meaning that all of Sun's languages now share a common

user interface. It also allows for multilanguage debugging within the IDE via a new graphical utility called dbx.

Forte Developer now includes a set of libraries called Native Connector Tool, which can bind and encapsulate C, C++ and FORTRAN code, presenting it as Java classes on XML-based services to the J2EE-based Sun ONE platform.

The new release, which is for Solaris 8 only, can be downloaded for free from <http://access1.sun.com/fortedevprod>; no time frame was given for general release. ■



97 days

3 geographies

4 teams

22 developers

35 deadlines

26,307 cans of Red Bull

**3 programming
languages**

1 solution

One solution? With all the stuff you have to deal with? As if that's going to work. Well, what if that one solution could free your teams from the many obstacles they face? What if it alone had all the integrated tools they need? Like software configuration management, modeling, requirements management, testing and best practices. What if that one solution even had automated project management? Then you'd have Rational Suite.* One solution, lots of answers. Need the proof? Check out what IDC has to say about customer success with Rational Suite at www.rational.com/offer/suite4.

be liberated

TeamShare Gets Interactive With Mercury

Bridge to testing solution among new features in TeamTrack defect tracker

BY DAVID RUBINSTEIN

In a continuing attempt to broaden the reach of its collaborative defect-tracking tool beyond its developer base, TeamShare this month will release TeamTrack 5.5 with a revamped browser interface, cross-database posting and field mapping capability, and the new ability to share data with Mercury Interactive Corp.'s TestDirector testing management solution.

"We call our approach collaborative product development," said Bruce R. Huebner, CEO of TeamShare (www.teamshare.com). "We've seen significant adoption of the notion of external ecosystems of customers and partners. You can't just pay lip service to requirements."

TeamTrack 5.5, a Web-based tool for Windows workstations, helps ensure that requirements are being followed allowing for the creation of audit trails that help companies make sure issues can be reviewed by all partners with vested interest, and to ensure that the correct fixes are made and implemented.

For the new version, TeamTrack's user interface was made "more user friendly," claimed product manager John Keller, and now includes spell

checking. "It's for a less technical audience. We needed something that could be rapidly embraced." The new version also allows broader e-mail submissions as part of the problem-solving process.

The tool's new posting and mapping capability allows developers to pass information across different TeamTrack instances or versions, or if fields in disparate applications do not equate, the mapping can be passed along with issues for distribution to the appropriate parties within the organization.

Another major new feature, said Keller, is called TestBridge, which is TeamShare's link to Mercury's TestDirector. In organizations where TestDirector is deployed, quality assurance engineers can run their tests and generate reports, and disseminate that information via TeamTrack 5.5 both internally and externally to developers, customers or partners, without the need for e-mail, which has no accountability features, Keller said. TeamTrack 5.5 also can be used to represent TestDirector workflow patterns, he added.

"TestDirector focuses on integrating tests and coordinating testing efforts," he said, "including writing and managing test scripts and reporting failures. We

take it from there and employ process enforcement. We route [an issue] and assign it to an engineer, or to another resource in the system."

Huebner acknowledged that TeamTrack's \$600-per-user price might be too high for some smaller development shops. In response, he said, the company was offering TeamTrack Workgroup, a scaled-down product. "People find they need

[defect-tracking] and they haven't budgeted for it," he said. It is being offered as a download only, effective Feb. 13, and costs \$295 per user with a minimum five-user buy, he said. TeamTrack Workgroup does not offer the ability to add new or auxiliary tables when working off a database, according to Huebner, who described it as simply "an out-of-the-box defect tracker." ■

.NET to Be Unveiled at VSLive

BY CHRISTINA M. PURPI

The availability and implementation of Microsoft Corp.'s Visual Studio.NET will grab the spotlight at this year's VBITS/VSLive conference and trade show, set for Feb. 11-16 in San Francisco. Microsoft chairman Bill Gates will jump-start the conference with the keynote surrounding the Visual Studio.NET launch, to which an entire day of the conference will be dedicated. Although Visual Studio.NET and the .NET Framework are available on Microsoft's MSDN developer Web site, the company is using VBITS/VSLive to officially launch the platform and tool set.

Keynotes by Gates and Microsoft Distinguished Engineer Anders Hejlsberg, to take place on ".NET Day," will address the next generation of XML Web services, Windows and Web solutions, and offer a peek at what's down the road for .NET. In addition to a day dedicated to .NET, there are two preconference days that will include workshops such as "OOP for Today and Tomorrow" and "Writing Great

Web Apps in C#," and one post-conference day with workshops titled "The VB Insider's View of the Common Language Runtime" and "Take VB.NET 2TheMax."

VSLive, produced by Fawcette Technical Publications, incorporates VBITS, VCDC and SQL2TheMax conferences into one complete show. ■



CONFERENCE:

Feb. 11-16
San Francisco Marriott and the Palace Hotel

CONFERENCE HOURS:

Wednesday, 8 a.m.-8 p.m. (.NET Day)
Thursday, 7:50 a.m.-8 p.m.
Friday, 8:50 a.m.-5:15 p.m.

EXHIBIT HOURS:

Wednesday, Noon-3 p.m., 6 p.m.-8 p.m.
Thursday, 11 a.m.-3 p.m., 6 p.m.-8 p.m.
Friday, 11 a.m.-2 p.m.

www.vslive.com/2002/sf

PR-Tracker™

Bug tracking
doesn't
have to be
complicated!

PR-Tracker helps manage software development projects by tracking software bugs with problem reports. PR-Tracker records problem reports in a network database that supports simultaneous access by multiple users. Features classification, assignment, sorting, searching, reporting, access control, user permissions, attachments and email notification. Supports easy configuration of data collection and workflow on a project by project basis. Redundant data storage for speed and data corruption recovery.

PR-Tracker Web Client performs bug tracking over the Internet or an intranet with the same easy-to-use Windows interface and features of PR-Tracker. Supports anonymous access, authentication control, and secure https protocol.

ProblemReport.asp enables customers to enter problem reports into a PR-Tracker database using a browser. A great way to implement beta test bug reporting or customer support. Customize this web page to collect the data you want and to match the look of your company website.

Download
www.prtracker.com
By Softwise Company

OMG TACKLES PROCESS MANAGEMENT

UML, MOF revisions won't be addressed until later in year

BY DAVID RUBINSTEIN

When Object Management Group Inc. members met this week in Anaheim, Calif., UML 2.0 and MOF 2.0 were not on the agenda. Those highly anticipated specification revisions will not be tackled until midyear.

Action, though, was taken on more than a few items of keen interest to software development leaders.

The group's Common Enterprise Models task force was to review initial submissions to a Workflow Process Definition RFP, according to Jon Siegel, OMG's director of technology transfer. The group also was to review a revised submission for a Workflow Resource Assignment Interface RFP from IBM Corp.

Siegel explained the RFPs are part of a broader Business Process Management Facility that encompasses workflow, Web services and e-commerce, based on OMG's Model Driven Architecture. The task force was expected to vote to issue an RFP for the facility,

Siegel said. The Workflow Process Definition file is fed into a workflow engine, which then calls upon resources within the management facility through the workflow assignment interface. Developers can tell the facility which resources it wants to be available, even for multiple workflow management systems, Siegel said.

The group's Object Request Broker and Object Services (ORBOS) platform task force was expected to recharter with the name Middleware and Related Services (MARS), to reflect OMG's change from a CORBA-based architecture to the Model Driven Architecture, Siegel said.

The MARS task force was expected to vote to issue an RFP for Deployment and Configuration of Distributed Applications based on the CORBA component specification, as well as vote to issue RFPs for Reliable Ordered Multicast for implementation of notification services, and Real-Time Java to Real-Time CORBA mapping. ■

BORLAND

◀ continued from page 1

have been market changes with the adoption of Java and the emergence of Linux, and so we have been spreading ourselves out to those platforms. But we are in a position now to be focusing back on the Microsoft platform and the .NET story."

He continued, "This is about freedom of choice. Borland provides the customers with a choice of platforms that you can make native code applications for—Windows, Java and Linux, and now the .NET platform." Thornhill added that Borland considers .NET to be a separate platform from Windows. "We see it as an evolution from Windows to .NET, and over the near term, people are going to want both .NET applications and Windows applications. Over time, Windows will probably be superseded by .NET, but for now you will need both."

Borland's goal, said Thornhill, is to ensure that developers can create an application for any one of those platforms, "then repurpose it for another platform very easily."

What about the functions that require Microsoft's .NET Framework and underlying libraries and services of the Common Language Runtime? "There are multiple ways of achieving [cross-platform portability], and at this time we're not giving the details of how we're doing it," said Thornhill. "But the result will be that you'll be able to take that application to another platform. It's like with Windows and Linux—but we showed with Kylix how, by using the component libraries that we have, you could have a Windows application running on Linux."

Michael Swindell, director of product management, added, "If you look at what we've done with Windows, we've provided all the functionality of Win32 through our VCL components, and the same thing with Linux with our CLX [Component Library for Cross-Platform] components. We've found that the .NET Framework does map very closely to the VCL and CLX frameworks that we're delivering today."

"There are two pieces to our .NET support," said Thornhill, "the interoperability and the

development of applications. Web services will be the interoperability between different platforms. So, you'll be able to use Borland's .NET Services to communicate across Java, Windows and Linux. For the second piece, our development tools will provide an environment for delivering .NET applications—native .NET managed-code applications. Developers will get the benefit of the .NET platform and the opportunity to continue to use the Borland tools across other platforms. That's what we'll provide in the second half of 2002. There will be a new round of products to deliver that functionality on all four platforms," he said, adding that they would be based on both the Delphi and C++ languages; Delphi is Borland's version of Object Pascal.

In early January, Borland also released a new version of its Enterprise Studio for Windows. "It's focused on the design-to-deployment requirements of our customers," said Thornhill. "With this product, you would be

able to model your application and then convert that over to your development environment, but maintain links to your model. The model would continue to live, and within the development environment you can go straight to execution and deployment."

Enterprise Studio includes Delphi 6.0, Rational's Rose Professional Data Modeler Edition and the Rational Unified Process. The studio also includes a brand-new tool from BoldSoft, called Bold for Delphi, which bridges the gap between the Object Management Group's Model Driven Architecture and a Delphi project. A version of the studio is also available with Macromedia's Dreamweaver UltraDev 4.

Bold for Delphi, according to Swindell, lets Delphi users interact with the OMG's new architecture. "You can use Rose to bring a model into a development tool. What Bold provides is a Delphi framework for maintaining the integrity of the model in the application," explained

Swindell. "Rather than converting from UML to code, the UML model actually lives in the application. Bold provides an actual object framework that is UML-aware, and can maintain the integrity of the model rather than converting it from model to code. You don't need the round-trip engineering that you normally see with UML products and developer tools—there isn't a conversion that takes place. Bold actually implements objects directly on the UML model."

For deployment, added Thornhill, "we are including the Borland Enterprise Server Web Edition, so you can create your application and deploy it to the Enterprise Server, which is an enhanced Apache server. We include one license for the deployment, but you might need to purchase more." The Apache server includes the Delphi Web Services Framework.

This version of Enterprise Studio is specifically for Windows, but a Linux version is in the cards. Thornhill said, "We started with Java, and we intend to ripple it through the product line. Not all the pieces are there yet [for Kylix]." ■



Cross-platform portability is essential, says Borland's Thornhill.



As DAWN BROKE,
CODY REALIZED HE
WAS ILL-EQUIPPED...



Characters and Images © 2002 Brad Fitzpatrick, Action Edge New Media. All Rights Reserved.

Try TotalView
FREE at
www.etnus.com

Don't battle complex code without the essential equipment! Etnus TotalView is the debugger that helps you find even the most elusive problems quickly, even in heavily threaded applications. Available on all UNIX and Linux platforms.

Etnus TotalView... *The Debugger for complex code.*


ETNUS
TOTALVIEW

Zero G Automates Update Options

Web-based installation service includes new launcher, target platforms

BY ALAN ZEICHICK

Installation-software maker Zero G Software Inc. has revamped PowerUpdate, its Web-based software installation system, to include more automated software update options and several new target platforms.

PowerUpdate, launched last year, provides a Web site where users can search for application updates, and if the update is available, it can be downloaded and installed onto the client system. According to Zero G's CTO, Greg Maletic, the biggest improvement is that applications can automatically check the site themselves. In the past, he explained, users had to manually check for an update.

To create a PowerUpdate 2.0-enabled application, Maletic explained, developers go to the PowerUpdate site, create an account, and download a small piece of Java code—the PowerUpdate client—which becomes a launcher for the developer's own application. "You name the

PowerUpdate client the same as your application, give it your icon, and specify what it should launch after it checks for an update," he said. "When the end user thinks he's running your application, he's actually running the PowerUpdate client. That solves one of the big problems we had with PowerUpdate," he added, that users often simply didn't check for the updates.

Zero G (www.zerog.com) has also made the PowerUpdate client's Java APIs accessible to developers, so that the application itself can check for updates on its own. Alternatively, said Maletic, developers might choose to create their own user interface for the update process, to create a branded experience or otherwise customize the update process.

PowerUpdate 2.0 also can interoperate with Windows' MSI installer, an application engine that Microsoft includes with Windows 2000 and Windows XP. Since the engine already is

in the operating system, said Maletic, the PowerUpdate client can just download an MSI file that contains all the installation parameters and then call MSI, instead of having to load and install its own Windows-compatible installation engine. "Prior to using MSI, you were

required to use either [Zero G's] InstallAnywhere, InstallShield's installer or Wise's installer to perform updates through PowerUpdate," he said, "but now on Windows you can use Microsoft-sanctioned technology as well."

The PowerUpdate release

adds new deployment platforms, AIX, HP-UX and Mac OS X. "PowerUpdate is just as suitable for a server-side update as a client update," explained Maletic. The tool had already worked with Linux, Mac OS, Solaris and Windows.

The price: Free. "All of these features are free," said Zero G CEO Eric Shapiro, "if you're updating up to 20 end points." License fees are negotiated for larger clients. ■

BEA CAJUN

< continued from page 1

and that applications built on Cajun will not run on other vendors' platforms. In addition, BEA's chief strategy officer, Bill Coleman, told ComputerWire in December that Cajun would sacrifice the concept of cross-platform compatibility as BEA tried to lock developers into its platform to ensure the company has a following to grow its products. The subsequent statements from BEA were given to SD Times after the Jan. 1 story prompted a flurry of letters and some heated discussions on Java message boards.

"Cajun is completely focused on having standards-based implementations, and that goes from the SOAP standard for Web services messages, to the WSDL for describing Web services, the UDDI for Web services directories and the J2EE standard," claimed Sebastian. However, when asked last month if it is true that Cajun will run only on BEA's WebLogic application server, Sebastian stated, "In its first release, the primary focus [of Cajun] will be running on the WebLogic server."

Further, when Sebastian was asked if applications built on Cajun would run on any other vendors' application servers, his

answer was, "I'm not prepared to make that statement." After the first article appeared, Sebastian told SD Times, "Perhaps I misunderstood the question."

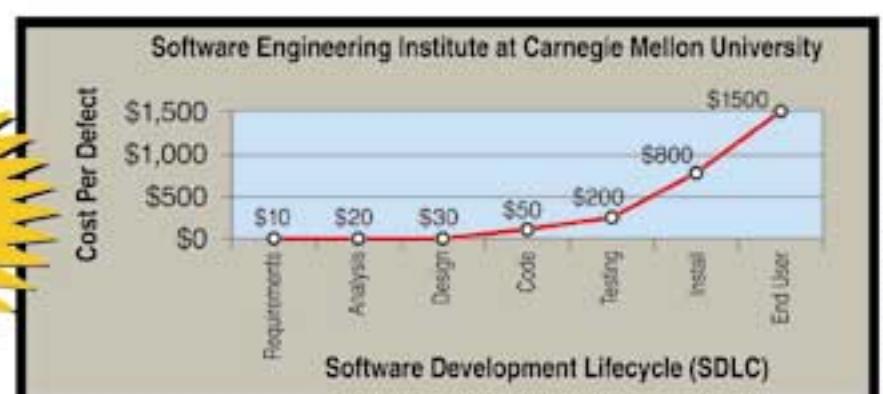
"The only hesitancy was not knowing the nuance of the different vendors' implementations and the degree to which they are compliant or not compliant. BEA can't speak for that," explained Sebastian. "I don't think we make commitments to what runs on other vendors' platforms; we make commitments about the J2EE specification and our compliance to it."

BEA plans to unveil Cajun at its eWorld Conference in San Diego this month. ■

How much are product defects costing your company?

FREE

ON-LINE DEMONSTRATION.
Join our free series of Webinars at
www.teamshare.com/webinars



New!
Ask us about our
integration with
PERFORCE

Don't wait until after your product is in the market to find a defect. Releasing a product with even a minor defect means your company loses credibility and, more importantly, it loses money.

Let TeamShare's
TeamTrack®
software fix your
defect tracking
and team
communication
processes.



Remember the good old days? Oh, say last year? In those days, you actually had enough people to do what needed to be done. There were people assigned to track all product defects, issues and enhancement requests and people to manage the overall process to make sure nothing fell through the cracks. There were people who ensured that everyone knew what to do and when to do it. But today you still have to release a quality product and you have less people to do it. The method you used then to manage this information now has tiny cracks appearing in what used to be a seamless process.

Defects not tracked. Issues not updated. Enhancements not implemented. Poor reporting. Issues slipping through the cracks. No ownership or accountability. Lack of communication between critical departments. That's why we developed TeamTrack software. To make sure that product defects and issues don't get lost. It automatically notifies the next person that an issue is assigned to them and ensures that everyone knows what they are supposed to do when they are supposed to do it - far faster and more efficiently.

teamshare
www.teamshare.com
1.888.832.6742

You could buy our competitor's software development tools,
but then you would have to use them.



Now integrates with Borland JBuilder



round-trip ER/UML
modeling with ER/Studio®

Where is it written that a program has to be hard to use just because you want to speed up your software design and collaborative development efforts? The fact is, it doesn't. Embarcadero's Describe™ gives you all the benefits of the UML (Unified Modeling Language) without having to subject your team to some complex, overpriced and totally inflexible application development tool.



real-time team
collaboration

That should be a huge relief. After all, your tools should eliminate complexity, not add to it. Describe simplifies analysis, design and application implementation for organizations working with Java, C++ and IDL. With features that include seamless integration with popular IDEs like Sun™ Forte™ for Java™ and Borland® JBuilder,™ real-time team collaboration, and round-trip ER/UML modeling, Describe streamlines any design, development or application re-engineering effort without forcing people to change the way they like to work.



integrated modeling
and development
environment (IMDE)

Simpler really is better. For more information, or to download a free evaluation copy, visit www.embarcadero.com today.



EMBARCADERO
TECHNOLOGIES®

Cajun to Be Revealed at BEA's eWorld

BY CHRISTINA M. PURPI

Highlighting BEA Systems Inc.'s seventh annual eWorld Conference will be the unveiling of Cajun, BEA's J2EE application development framework that the company claims will make writ-

ing applications on the WebLogic platform easier for developers, including those not highly skilled in the nuances of Java 2 Enterprise Edition.

Scheduled to take place Feb. 24 to Feb. 27 at the San Diego

Convention Center, the conference will feature keynote speakers Alfred S. Chuang, CEO of BEA; and John E. Davies, vice president of the Architecture Group and director of the Solutions Market Development

Group at Intel Corp. There also will be three technical keynotes, new to this year's conference.

Also new are highly technical "Extreme" sessions and "Office hours," which provide conference attendees the opportunity to speak one-on-one with presenters.

The conference will offer

exhibits from more than 150 vendors and more than 125 sessions on a number of different technical levels, as well as on business and general-interest topics. ■

BEA eWORLD

CONFERENCE:

Feb. 24-27
San Diego Convention Center

CONFERENCE HOURS:

Sunday, 8 a.m.-8 p.m.
Monday, 7:30 a.m.-7:30 p.m.
Tuesday, 7:30 a.m.-11 p.m.
Wednesday, 7:30 a.m.-3:30 p.m.

EXHIBIT HOURS:

Sunday, 5 p.m.-8 p.m.
Monday, 10:30 a.m.-4:30 p.m.
Tuesday, 9:30 a.m.-3:30 p.m.
Wednesday, 9:30 a.m.-3:30 p.m.
www.bea.com/events/eworld/2002/sandiego/index.shtml

STARBASE

◀ continued from page 1

piece from TBI gives Starbase "a tremendous value proposition and very good ROI," according to Starbase marketing director Lydia Patterson.

StarTeam Elite, announced in mid-December, includes a new requirements component that is tightly integrated with Caliber-RM so StarTeam Elite users can build requirements in Caliber-RM and map them into StarTeam, preventing users from checking in code that is not linked to either a requirement, change request or task.

In the first half of this year, Starbase plans to release a StarTeam integration with IBM's Eclipse development framework, allowing developers in the Eclipse Workbench to access StarTeam functionality "just as you could through VisualAge," Patterson said. Also, Starbase's CodeWright editor will be fully integrated with Microsoft's Visual Studio.NET, so those developers can take advantage of CodeWright's functionality from within the development environment.

The next release of StarTeam, also due in the first half of this year, will add replication, similar to what Patterson said Rational has made available with its ClearCase change management tool. Patterson claimed, though, that while ClearCase only replicates files from one server to multiple sites, the StarTeam replication includes all five components—file versioning, change requests, threaded discussions, project management and requirements. ■

Ride the next
WAVE
Beyond JMS & Messaging.

The "next wave" in enterprise messaging will not be judged by speed alone. The "next wave" of Web services will push distributed systems to the limits of scalability, reliability, and flexibility.

SpiritSoft goes beyond JMS to offer the only open enterprise messaging-based technologies that deliver multi-plug messaging, multi-channel delivery and dynamic event management.

Find out more about the "next wave" JMS architecture by downloading our whitepaper.

spiritsoft™
the integration company

Download our white paper
"The SpiritSoft Architecture: Beyond JMS & Messaging"
Visit www.spiritsoft.net/downloads

**Looking for an open road to
embedded development? We're behind
you all the way.**

The road to embedded development does not have to be bumpy. MontaVista Software can help you navigate around the road blocks often created by proprietary RTOS platforms. MontaVista™ Linux® gives embedded developers the tools they need to reduce development time and improve product quality.



Scalable. Dependable. High Performance.

MontaVista Linux targets the CPU architectures, board and system level platforms required by leading edge embedded applications. Today's communications and consumer applications can benefit from additional tools like Java, High Availability and Graphics.

To learn how you can make the transition, attend our seminar "**Moving from Proprietary RTOS to Embedded Linux.**" For details and registration, point your browser to www.mvista.com/sdt02.html, or e-mail seminar@mvista.com, or call (408) 992 - 4722.



Powering the Embedded Revolution

Triarc Alliance Offers Set-Top Box Test Facilities

Trio of companies sees cable networks as a platform of the future

BY EDWARD J. CORREIA

Who would have thought that the cable box would someday be a coveted target platform? Yet that is exactly what creators of the Triarc Content Labs are banking on for the future.

Triarc Labs was formed by an alliance between embedded Linux developer Lineo Inc., tools maker Metrowerks Corp., and Broadband Communications Sector, a division of Motorola Inc. and maker of what Gartner Inc. calls the world's most pervasive

set-top box hardware. Triarc's charter will be to assist in the development, testing, integration and deployment of cable-box applications developed with Metrowerks' Code-Warrior IDE for Motorola's DCT5000 series hardware running Lineo's Embedix.

According to a joint report, Triarc will offer developers access to high-tech facilities equipped with digital head-end systems and capable of emulating the two-way cable plants that operate today's cable sys-

tems and aid in development and testing of all manner of interactive applications, including pay-per-view, video-on-demand and personal video recording. The company will work in concert with Motorola's Horizon program, which offers certification for applications destined for cable networks, an assurance to cable operators that the programs will not crash their systems. Triarc's development facilities, which will be located in Boston, Salt Lake City and Austin, Texas, are scheduled to be operational by midyear.



Having a single source makes app development easier, says Metrowerks' Welch.

stop shop, he said. "Before Triarc, to write an application for a set-top box, developers had to go to one vendor for the application tools, maybe go someplace else for the operating system SDK and another for the hardware solution. Having all three pieces together makes it easier."

According to Metrowerks COO Jim Welch, the focus of the new organization is "to make sure that the boxes have high-value content and to show developers a path to market." To that end, the idea behind Triarc was that of a one-

target customer for the services will be ISVs already developing cable-box apps, such as the program-listings channel common to most cable television systems.

And enterprise development can

be seen in the form of set-top applications developed by hotel chains for guestrooms, he said.

All three companies will share equally in funding the new venture, Welch said, adding that the potential benefits of the project far outweigh the risks. "There's a level of risk in any software application development. But there certainly is a high [potential] reward because of the number of customers you could reach if successfully deployed [to cable boxes]. Even in economic downturns, companies must continue to invest in R&D and next-generation products. When the economy turns around, if you haven't invested in your future, you're going to miss the opportunity to gain market share," he said. ■

Bluetooth SDK for Palm OS Goes to Beta

Company claims free tools will make networked handhelds more common

BY EDWARD J. CORREIA

Developers building applications for the Palm OS can now count a Bluetooth SDK among the free tools available from Palm Inc. The company has released a beta version of the software development kit that includes a Bluetooth 1.1-compliant communications stack, a Bluetooth API, and configuration tools that enable developers to build apps that communicate wirelessly with other Bluetooth-enabled devices, the company says.



The first apps will be cell-phone gateways, says Palm's Mace.

Michael Mace, Palm's chief competitive officer, said that while the SDK's official status is beta, the most important parts of the tools are finished, including the Bluetooth stack. "The only thing that's beta about this is the documentation and the sample code," he said.

Some of the earliest uses of Bluetooth for Palm OS, according to Mace, will be to connect Palm devices to cell phones and use the devices as Internet gateways for browsing and e-mail. "To the

Palm, the Bluetooth-equipped cell phone will feel like a modem, the same as if you clipped on a modem or had one built in. The phone can be in your pocket or bag; you don't have to pull it out. It's going to make it a lot easier and more common for Palm handhelds to have live networking connections," he said. Other potential applications include linking Palm phone directories to the phone dialer and wireless data synchronization with desktop systems.

Mace said that adding Bluetooth capabilities to the Palm OS development envi-

ronment will not change the experience much. "It's very much like testing a typical Palm app; it's the same development cycle, using the Palm OS emulator" to test and debug the applications. The difference, he said, will be in the way the emulator handles Bluetooth calls, and because Bluetooth hardware is required. "The OS emulator does a pass-through to the Bluetooth device, as if you have installed Bluetooth on the emulator."

The Bluetooth SDK beta can be downloaded now for free at www.palmos.com. ■

OMA

◀ continued from page 1

value propositions that are higher up on the value chain," thereby broadening the technology's appeal and the overall market size, he concluded.

Heintzman said the idea behind OMA is to develop a standardized way of "delivering a new class of mobile-enabled applications that are sensitive to location and context, are delivered to a number of different kinds of devices, make the end-user experience easy and more consistent, and allow [users] to move from device to device in a transparent way while maintaining the transactional integrity of their interaction with the system."

According to an OMA report, the effort has been embraced by many major communications companies, including

AT&T Wireless, Cingular Wireless, Fujitsu, Matsushita, Mitsubishi, Motorola, NEC, Sharp, Siemens, Sony Ericsson, Symbian, Toshiba and Vodafone.

Heintzman said that OMA will pluck the gems from existing technologies and "plug [them] into a comprehensive architecture," using a twofold strategy.

To start, OMA has suggested specifications for client devices, beginning with WAP's XHTML, Multimedia Messaging Service (MMS), SyncML and VoiceML. "The second part of that was to recruit the J2EE vendors," he said, including BEA, Hewlett-Packard and Sun, all of which have announced their participation. The goal here, he said, was to define the server-to-device interfaces needed for OMA to really work. "A lot of what's going to be inside OMA is the

definition of mobile Web services, which [will] standardize how application functionality links on the back end and how to expose [that functionality] to the mobile world," he said, including the ability to integrate user identity and location within applications.

Unlike the WAP forum, which Heintzman said was bogged down with the tasks of developing specifications and reference implementations, OMA will simply orchestrate those actions among others. "What OMA will do is act as an umbrella organization that designs the high-level architecture of how applications can be architected and points to lower-level specifications to do the on-the-ground work."

While commanding Nokia for its efforts to unite the industry, Jeremy James, senior director of marketing for

Internet services at Qualcomm Inc., remained skeptical about the effectiveness of such a consortium. "These sorts of cooperative endeavors are a good thing but have their own timeline characteristics," James said. Qualcomm, which develops and markets its own Binary Runtime Environment for Wireless (BREW), a small-footprint runtime environment for CDMA mobile devices, is not part of OMA. "While we're open to discussing involvement with Nokia, our focus is on moving forward with market-ready solutions, which BREW is." He said BREW has been deployed commercially by Korea Telecom Freetel, a Korean CDMA wireless carrier, and according to James, could be ported for use on GSM or other architectures. "The environment doesn't care what the

wireless technology is. As long as BREW is on the handset, the application will run on it."

IBM's Heintzman, who also is chairman of the board of the SyncML initiative, said that OMA is not like other consortia. "The people at OMA have influence in these other groups largely because [they are] the same people. I will sit at the table at OMA and at SyncML. And obviously that provides influence." He said that the next step for OMA will be to work face to face with its constituency. "We're going to sit around the table and take an inventory, going from person to person, company to company, and find out what each has to bring to the table. All of us have been working on this, so we're not starting from scratch." Heintzman would not reveal OMA's timetable for any of its deliverables. ■

Microsoft XPE 'Half-Truths'

Embedded Linux vendors claim marketing deceptive

BY EDWARD J. CORREIA

Microsoft Corp. is at it again. That's the feeling of several embedded Linux vendors after recently discovering a document released on Microsoft's Web site. Apparently posted in late November, the document, titled, "Why Microsoft Windows XP Embedded and Not Embedded Linux?" can be found at www.microsoft.com/Windows/embedded/xp/evaluation/compare/notlinux.asp.

"It's fairly classic marketing-generated half-truths," said Bill Weinberg, director of strategic marketing at embedded Linux developer MontaVista Software Inc. (www.mvista.com) "They conveniently cherry-pick their facts from the world of Linux and ignore a lot of realities that put embedded Linux in parity or ahead of what Microsoft has to offer." Despite repeated requests, Microsoft representatives declined to be interviewed for this story.

Weinberg said that in the document, Microsoft claims to include with Windows XPE "preconfigured and extensible design templates [including those for] set-top box, thin-client, kiosk and gateway" devices, while Lineo Inc. supports "only four preconfigurations, two for x86 and two for PowerPC."

According to Lineo CTO Tim Bird, Microsoft's information is dated. "Presently, Lineo supports many boards across embedded processors, including ARM, MIPS, PowerPC, SH3 and x86," he said. Weinberg added that Microsoft ignores MontaVista's list of more than 70 supported boards spanning six processor architectures.

Microsoft also claims to offer an "integrated, all-inclusive end-to-end tool set [that] delivers faster development time,"

while claiming that embedded Linux "lacks an integrated tool set," thereby slowing development time.

"Linux has a standard and highly functional tool set that starts with GNU and includes IDEs and code management tools," countered Weinberg. He contended that the primarily "scriptless" development environment of Windows, with its inherent point-and-click dialog boxes, often requires human intervention. "All too frequently, versions of Windows present dialog boxes in contexts that are headless or otherwise inaccessible, hanging applications and whole systems," he said.

Elsewhere in the document, Microsoft boasts of "broad interoperability with .NET-enabled applications and services that span devices" while claiming that "Linux has no strategy for integrating applications and services across devices" and the Web. It further states that "there is no DCOM support" for interapplication communications, and implies that Linux supports only CORBA. "Untrue," said Weinberg. "There are multiple implementations of COM/DCOM, support for XML, SQL, LDAP and a broad array of middleware and protocols from open-source and commercial vendors."

Weinberg commented on other parts of the eight-page document. "It's interesting. In a lot of cases they're not even comparing Linux to anything. In the performance and uptime sections [for example], they're comparing Windows to itself, saying how [Windows] XP is better than Windows 98. Are they airing their dirty laundry or comparing Ebola to leprosy? Can they really make these claims with a straight face?" ■

WIND RIVER PUTS JEODE IN JWORKS 4.0

BY EDWARD J. CORREIA

Wind River Systems Inc. in late January was scheduled to release JWorks 4.0, the latest version of its Java development kit incorporating Jeode, a high-performance JVM from Insignia Solutions Inc. Wind River began licensing Jeode in March of last year, severing a five-year relationship with Sun Microsystems Inc., its former JVM licensor.

JWorks 4.0 integrates Wind River's VxWorks real-time operating system with Jeode, the embedded JVM that the companies claim is faster than Sun's, thanks to a dynamic adaptive compiler and the ability for developers to configure performance characteristics and control memory footprint. According to John Fogelin, CTO and general manager of Wind River's Platforms Business Unit, Java developers using JVMs from Sun and others have been hampered by their performance. "The use of Jeode technology versus our earlier Sun

implementation has improved performance of one customer's Java application [as much as] 300 percent," he said in a statement.

The new version also includes the JWorks SDK, which contains development tools, benchmarks and sample code; and JWorkSim, a host-based environment that permits Java applications to run in VxWorks simulation on the development host machine. The runtime also contains Wind River's graphics and multimedia libraries, which serve as a foundation for the environment's abstract windowing toolkit.

According to the company (www.windriver.com), JWorks 4.0 implements Java for Sun's 32-bit PersonalJava and J2ME Connected Device Configuration (CDC) device classes, and is compliant with the PersonalJava 1.2 specifications including SDK 1.2.2 security and JNI, and is based on the JDK 1.1.8. Pricing was not available at press time. ■

the ideal solution

Tilcon Real-Time Developer

just click to test interface

Simply fill various object resource sheets (like this one, for a slider object) and customize their appearance.

Real-Time Embedded GUI/HMI builder for:

- VxWorks®
- NT® Embedded
- Windows® CE
- Photon microGUI for QNX® 4.25
- Windows® XP/2000/NT/95/98
- RTX (VenturCom Inc.)
- Photon microGUI for QNX® 6.1

New! OPC, ODBC and map support

Dramatically reduces development time
Creates custom graphical interfaces
Ideal for memory constrained devices
Immediately delivers under multiple platforms without any code changes

Download and Test Drive
Tilcon Real-Time Developer
For 30 Days FREE!!
www.tilcon.com

TILCON
The Graphical Interface Company

tel: 800-665-5928 (toll free in North America)
or 613-226-3917 fax: 613-226-3631
e-mail: infonews@tilcon.com

TILCON Real-Time Developer is a trademark of TILCON Software Ltd. Microsoft and Windows are either registered trademarks or trademarks of Microsoft Corporation in the United States and/or other countries. All other company and product names are trademarks of their respective corporations.



Power Grab, or Powerful New Paradigm?

Debate rages over benefits of .NET Framework to enterprise development

BY DAVID RUBINSTEIN

To some, Microsoft Corp.'s .NET Framework and tools are the golden path to the future of software as services. To others, they're just another attempt by Microsoft to use developers to gain another pot of gold.

Analysts and industry watchers who have been tracking .NET from early beta through its Jan. 15 release have differing opinions as to whether the software is revolutionary or simply an attempt by Microsoft, which dominated the PC desktop market, to gain control of the distributed application market.

"This is what the industry has been begging for for the past six years," said Juval Lowy, a software architect and author who watches Microsoft. ".NET is the next step in the evolution of software development technology." Lowy said that software development is in crisis, as corporations try to maintain "horrendous" codebases and the gap between business needs and developer skill sets widens. "There is little actual new development happening,

as most developers spend up to 85 percent of their development on plumbing issues," he said. .NET, he added, removes most of the plumbing issues, allowing developers to focus on business logic.

Analyst Will Zachmann of Meta Group Inc. (www.metagroup.com), calls .NET "the most interesting applied computer science" he's seen in a long time. "The Common Language Runtime, a new way of creating binaries and linking them with XML to create Web services...it's pretty big-deal stuff."

The move from desktop operating systems and programming tools to a distributed architecture marks a radical move for Microsoft, which has spent a great deal of money on research and development and is taking a huge risk to strengthen its position over the next 10 years, according to Gartner Inc. (www.gartner.com) analyst Mark Driver. However, with that, he said, comes unavoidable discontinuity in the product line.

"The existing Microsoft codebase will not migrate smoothly," Driver said. "And,

as soon as Visual Studio.NET ships, COM becomes a legacy platform for all intents and purposes." Despite what he called good connectivity between .NET and COM, Driver said he expects they will reside together for about four years, as companies write new applications in C# or Visual Studio.NET and slowly rewrite existing codebases to the new platform.

Yet the Achilles' heel of adoption, Driver said, is the fact that .NET is platform-specific. "It's a migration path for Windows developers. The question for them is when, not if. Their only choice is how long to wait." Driver expects that the vast majority of Microsoft developers will stay with .NET and not migrate to Java, although there will be some defections, he said. On the other hand, he added, he does not expect companies that have committed to Java to move to .NET.

"In many ways, Microsoft is playing catch-up with Java, in terms of leading-edge e-business technology," Driver said. "Yet in some ways, it leapfrogs Java with support for Web services and XML."

Meta Group's Zachmann argued that neither solution provides true platform neutrality. "Economically, there's more benefit to de facto platform independence on Windows than on Java," he said. "Any server vendor, except Apple and Sun, will sell you a Windows box, and they compete on price."

Zachmann said .NET will level out the unbalanced views that now exist in the development community. "There's been a real disconnect between the perception and the reality," he said. "The perception has been that to do enterprise stuff, you must use Java. Well, Java performance sucks. Trying to do EJBs with entity beans and container-managed persistence is terrible in terms of performance. People are beginning to realize that the Java story isn't what it's made out to be, and that Microsoft is ready to go in the enterprise. The reality is, you can get there with both of them."

Yet Gartner's Driver doesn't believe Microsoft's solution is enterprise-ready

► continued on page 20

Beta Users Praise .NET Framework

However, minor problems, missing capabilities are seen in final test release

BY CHRISTINA M. PURPI

Randomly selected beta users of Microsoft Corp.'s .NET Framework and development tools have had mostly good things to say about the technology that is supposed to change everything. But the technology is not perfect, as some users have found a few glitches as well as some functionality lacking.

Visual Studio.NET, which will be released at the VBITS/VSLive conference later this month, has been tested by numerous organizations over the past couple of months. The consensus among the beta users interviewed is that Visual Studio.NET and the .NET Framework seem to have achieved what Microsoft claimed they would. Although the beta versions have had their share of problems and bugs, users—including vendors selling add-on products to .NET—reported that Microsoft has been quick to address problems that were raised prior to final production.

Bryn Rhodes, lead architect of Dataphor at component vendor Alphora (www.softwisetools.com), a division of Softwise Inc., feels comfortable with the .NET Framework. "In a lot of ways it was like coming home, and in a lot of ways we had to totally readjust the way we thought," said Rhodes.

For example, he said, ".NET has a managed memory. We came from an unmanaged environment, where you have to free every resource you allocate. In .NET, the memory is managed for you. It was a big paradigm shift, but once we finally realized how to do that, it felt comfortable."

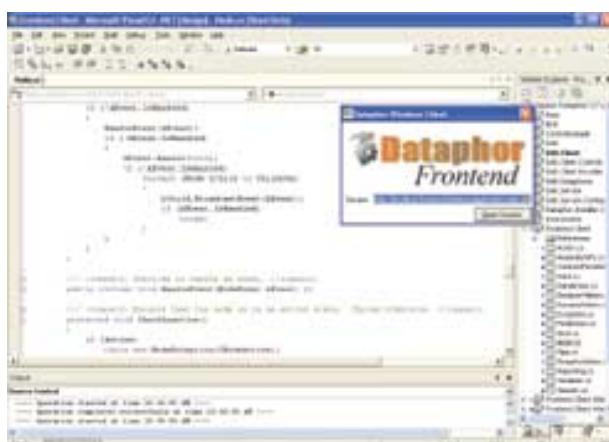
Dataphor provides an alternative to the data access and manipulation capabilities of .NET, and according to Rhodes, its Data Access Engine mends what he calls core inadequacies of current database systems.

".NET is very critical [to our business]. With the amount of code we would have had to write, we'd be a year out," praised Rhodes.

Rhodes believes that it would make life a little easier if .NET were able to do multiple inheritance. "The only serious technical issue we have is that we find ourselves duplicating code, where if we had the ability to do multiple inheritance, we wouldn't be duplicating code."

The transition to .NET was quick, according to Rhodes. "We had written the original product in [Borland's] Delphi and ported almost instantly, and within a couple of weeks, we were up and running on .NET."

Component vendor DevComponents.com (www.devcomponents.com) has been creating reusable components for



Alphora's switch from Delphi to .NET was almost instantaneous.

the .NET Framework for the past year. "The biggest change is the amount of time spent; the product is also more stable than before and has fewer mistakes," claimed Denis Basaric, president of DevComponents.com.

Basaric foresees potential problems, however, with migrating older Windows applications to .NET.

Ferdy Khater, director of application development for Continental Airlines Inc. (www.continental.com), chose a portal for handheld and wireless products to test .NET, explaining that he was

not going to develop a mission-critical application with a product that is still in the making. He wanted to reach out to technology-savvy travelers to deliver flight status, availability, schedules, frequent-flier information, itineraries, gate information and seat maps to handheld devices, including cell phones and computers based on Microsoft's Pocket PC and Palm's Palm OS.

Is .NET critical to his shop? "If you talk to the marketing guys, it's critical," claimed Khater. "Overall, it's critical. It's revenue-generating, and it attracts more customers."

The introduction of Visual Studio .NET has changed his way of thinking. "We used to be a Visual Basic shop. But because of marketing and the Web, you want something out there quick," he said, adding that it's faster to create applications for the .NET Framework using Visual Studio.NET than to develop apps in Visual Basic for Windows. However, no technology is perfect. According to Khater, there are a couple of minor problems with the interface. "Visual Studio.NET could use a lot of enhance-

ments with regard to the interface, but it has nothing to do with the underlying mechanics of the framework. Programmers don't gripe about that stuff."

Khater gives Microsoft credit when it comes to fixing problems. "Any problems or bugs we had, they fixed. There are no outstanding problems."

Stephen Forte, CTO of Zagat Survey LLC (www.zagat.com), decided to use the .NET Framework as a platform for developing an internal content management system. The Zagat Survey is a collection of guides for restaurants, hotels and nightlife printed for specific locations. .NET basically "runs our business," he said, "by collecting survey information [and] tallying up scores. [It] does on-screen work, editorial work, integrates with Adobe Framemaker, produces the book, and then transfers into the Web site."

"We obviously took a risk by building mission-critical applications on a piece of beta software. If it wasn't going to be .NET, it would have to be something else, like C++ or Java," said Forte.

Like many others, Forte hasn't seen any major problems with the new framework. He claimed that there are the traditional bugs that come with beta test-

► continued on page 20

.NET: Same Concepts, Different Deployment

New Microsoft platform may not change the way developers think and build apps

BY EDWARD J. CORREIA

Like death and taxes, Web services appear to be inevitable. The good news is that according to some of the industry's top software development tools makers, the changes for object-oriented developers won't be terribly significant.

"Basic development does not have to change that much, you still have to write and test to the best of your ability," said

Ido Sarig, vice president of product marketing at application testing tools company Mercury Interactive Corp. According to Sarig, when developing .NET components,

"what really changes is when you hand off that component to the production application. Before Web services, the person who was testing the application was your buddy sitting in the cube next to you. Now you don't have a very good idea or control over the way your

component is going to be used," or how it will behave when confronted by network delays and other factors out of the developer's control, he said.

"If you're talking about a .NET component that is built with C#, C++ and Visual Basic, we support all those technologies today and we don't care how a component is going to be used," said Sarig, adding that it's "the process of testing and monitor-



Rational's Quantify reports time spent in each .NET function.

ing to include network delays that becomes a little tougher." Mercury's (www.mercuryinteractive.com) testing tools support HTTP, XML and most SOAP capabilities; the company is working on UDDI support, he said.

Jon Sanders, director of software engineering at Rational Software Corp., agrees that performance awareness is critical for .NET developers, but for different reasons. "Similar to the Java world, you're now running on a virtual machine with much thicker layers between [your program] and the processor," and therefore performance is "much harder to achieve and much harder to predict. Things that you might take for granted [in conventional programming], like adding an element to a list, may be a very expensive operation."

To help combat this problem, Rational offers PurifyPlus for Visual Studio.NET, a set of runtime analysis tools including memory, code coverage and Quantify, its performance tool. "Quantify measures the time spent in every method and on

► continued on page 21



Performance awareness is critical to .NET developers, says Rational's Sanders.

BETA USERS

◀ continued from page 19
ing, but "you forget that it's beta software. There is nothing that slows down development."

Forte wasn't making a major platform change when he converted to .NET, "but we had to learn high-end stuff and a new

language. With .NET, we just had to learn the new object-oriented stuff because [the developers] knew Visual Basic already."

Dave Bush, owner of DMB Consulting LLC (www.dmbcllc.com), is developing a project that has a C# Windows Forms client talking to a C# Web service that will be used to allow

programmers to access Visual SourceSafe over the Internet. According to Bush, .NET "has provided a set of tools that are easier to use and more productive than anything available in the Java arena. Sun is in trouble." Windows Forms is a set of classes in the .NET Common Language Runtime that provide a

standard interface for building GUI applications.

EarthConnect Corp. (www.earthconnect.com), a new Web services company, has also been beta testing the .NET platform. "It hasn't really changed our thinking, because we started thinking with .NET," claimed Steve Gold, vice president of

business development. EarthConnect's Galapagos project is a commercial Web service that delivers live financial information that developers can integrate into their devices.

The biggest benefit of building applications using Web services, said Gold, "is in the ease of everything. It is very simple to build a Web service that works across multiple devices."

Before .NET, it was difficult to write applications, for example, that were capable of sending data to 100 different devices, claimed Gold. ".NET makes that really easy to do."

Are things missing from the framework that he would like to see included? "There are always things that as you get into it, you wish there were certain features, but that's what versions 2 and 3 are there for."

Bruce Krell, principal architect at SWA Engineering Inc. (www.swa-engineering.com), which helps companies implement custom software, is using the .NET Framework to develop a large enterprise Web-based workload management system. He's been using the beta version of .NET to distribute work assignments and job tasks to hundreds of users.

"Right now, it's in pretty decent shape," he claimed.

He would like to see an auto-garbage collection feature added to .NET, but despite that, he feels ".NET is what programming languages should have had 10 to 20 years ago." ■

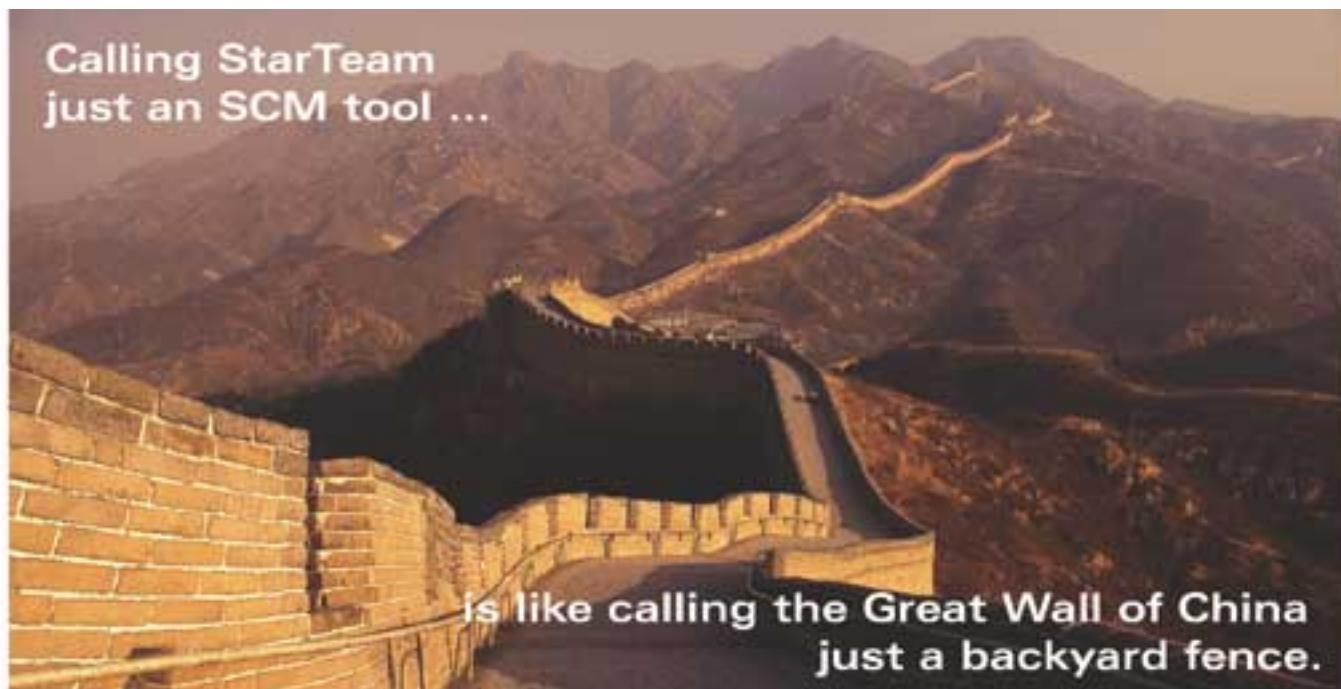
DEBATE

◀ continued from page 18

just yet, and is recommending his clients not attempt to deploy mission-critical applications on .NET for at least nine months after it ships. However, people in development now with March release dates are confused about which platform to develop to, he added.

Driver sees ASP.NET as the "crowning jewel" of the framework. "This will be adopted quickly, as it is far superior in terms of stability and security to the old ASP."

Driver also said there could be antitrust issues around .NET My Services, Microsoft's hosted Web services (formerly known as HailStorm) that require a Microsoft Passport account to access. "People are looking at it, but they are afraid of Microsoft dominating Web services, as everything runs through Passport." ■



StarTeam

Automated Configuration and Change Management System

StarTeam® is software configuration management plus. Perhaps you already use Microsoft® Visual SourceSafe® or some other SCM technology and you are thinking, why do I need more than that? Two words: increased productivity. With time equalling money, improving team productivity is a necessity not a luxury.

Do you have distributed teams? Perhaps you have remote offices and team members working from home, all needing fast access to project information 24/7?

StarTeam's central repository and delta data transfer avoid replication delays and ensure that all users get access to the latest changes, at high-speed, whenever, whenever. And its Web-centric architecture provides a high level of security for all remote users.

Do you have several developers doing their own thing, resulting in scope creep? What if you could focus them only on approved requests? Now you can. StarTeam's process rules require your developers to link code changes with the appropriate change request, requirement or task. Not linked? No code check-in allowed. Major productivity increases.

Ever lost code? StarTeam can reconstruct any configuration by rolling back to any point in time. One step further—ever lost a key developer? No worries. StarTeam's repository maintains a

whole history of the application's assets, including discussion topics, requirements, change requests, who made those requests, why, when, etc. Now your team can pick up the application without so much as a hiccup.

And StarTeam is tailorable. You can set up the workflow to meet your organization's needs. And with StarTeam's open Java™/COM API, it becomes the best fit for your team's needs.

Easy to adopt and deploy, StarTeam can replace or directly access archives in Merant® PVCS® VM or Microsoft Visual SourceSafe.

For the complete picture on how investing in StarTeam will boost your team's productivity, download *Making the Business Case for StarTeam* at www.StarbaseROL.com.

Check out StarTeam for yourself—download a 30-day evaluation copy. Call for a quote or for more information—(998) 203-8847.

You'll wonder how you've made it this long without StarTeam.

StarTeam is part of the Starbase Collaboration Suite™, a complete development platform, delivering source automation and universal integration across from requirements definition through development, testing and deployment.



DEPLOYMENT

◀ continued from page 19

every source line," said Sanders, giving developers the ability to see that calling on the .NET library that manages lists, for example, is "not a three-cycle operation as it was in C+, but is a 3,000-cycle operation. And perhaps I should achieve my ends a different way."

Michael Swindell, director of product management at Borland Software Corp.'s RAD Tools division, said that developers may have already cleared one of the hurdles of switching to .NET. "The model does change the way developers build their applications. But developers have been approaching this for several years now, using the Internet and networks to build distributed applications. [.NET] formalizes the loosely coupled model of using services on the Internet as a development platform," said Swindell. "So the switch is merely a formalization of the distributed application model to a more loosely coupled model."

Also important when breaking an application into components, said Rational's Sanders, is "splitting your program in the right place so that you limit the number of interactions" between components. One of the measures of a good object-oriented program, he said, is by how few interactions take place between classes. "If you have too many interactions, then you probably haven't split them up in the correct logical points and you're creating a spaghetti of interactions." And because of the latency of the Internet between component interactions, "it's 10 times more important to limit interactions."

Another potential pitfall when assembling applications using Web services, according to Borland's Swindell, is a lack of high-level protocols. "One of the things developers will have to get used to is that not all of the infrastructure for providing security, authentication and reliable transactions is there in an open and standard way that the subflooring is," he said, referring to existing low-level SOAP, XML, WSDL and UDDI protocols.

Swindell said that to fill in the gaps near-term, developers looking for these capabilities may have to decide whether to "adopt a proprietary solution and wait for standards to evolve" or hold off altogether. "Borland

says to start making your applications available through Web services, but build them in a way that's modular enough so that you can replace proprietary technology with open technology" as it becomes available.

Swindell believes that the advent of Web services also will play a major role in the integration

between Java and other infrastructures. "For the first time we'll have a distributed model that will be supported equally by both environments. Rather than RMI and CORBA and COM—all these different technologies that required bridges and middleware to communicate between the Microsoft world and

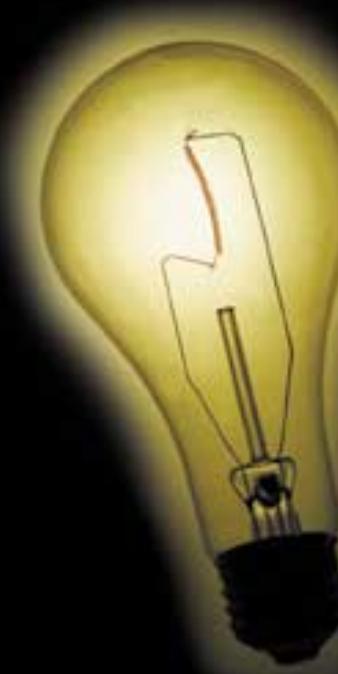
Java—Web services allows us to integrate these systems directly and in a language-neutral way."

Borland signaled its embrace of Web services with the releases last year of JBuilder 5 in June and Kylix 2.0 in November, and according to Swindell, plans to support all emerging technologies on all of its tools, including

the new JBuilder 6. "Our initial goal is to have Web services on all of the tools and products by early next year," and to add higher-level Web services capabilities later in 2002, he said, adding, "Microsoft is moving .NET in as the new API of Windows, and we intend to support .NET as a platform." ■

"I had the opportunity the other day of 'playing' with InstallShield, and then it dawned on me what a great product I have in Wise for Windows Installer. It really does make installing our programs simple."

*—Martin Hart, Memory Soft S.L.**



© 2002 Wise Solutions Incorporated. All rights reserved. InstallShield is a registered trademark and service mark of InstallShield Software Corporation. All other trademarks are the property of their respective owners.

"You-know-who" would have you believe that they are the only ones you should think of when creating software installations. Our Wise for Windows Installer tool has convinced thousands of developers otherwise. Wise was the first to offer an installation product for Microsoft's Windows Installer service, first to support the Microsoft .NET Framework, and the first to create 64-bit installations.

Take a stand for ease-of-use, reliability, and world-class technology and switch to Wise for Windows Installer.

Want to know the other reasons why you should switch to Wise? Get the switch kit and find out at www.switchtowise.com or order today at 800-554-8565.

*Unpublished testimonial from a satisfied Wise Solutions customer. Full text of this quote can be found at www.wisesolutions.com.



Software installations made easy™

EDITORIAL

Dot Net Is Here

Long in the making, Microsoft Corp.'s .NET solution set is finally going to be finished. That's a bit misleading, of course. The .NET brand has appeared on nearly every enterprise-class product announced from Redmond over the past year, such as the family of .NET Enterprise Servers, reflagged packages of BizTalk Server, Exchange Server and SharePoint Portal Server. Just about the only "dot-netness" about these products has been in Microsoft's marketing materials.

Of course, the .NET Enterprise Servers must not be confused with Windows.NET Server, the next iteration of Windows 2000 Server built atop the Windows XP code-base, and due out later this year.

What's actually going to be unveiled in final form at the VBITS/VSLive conference (see ".NET to Be Unveiled at VSLive," page 10) will be three other parts of .NET.

The .NET Framework is a runtime library containing components and API calls focused on letting applications publish and subscribe to XML-based Web services.

There's the Common Language Runtime, which will provide a new abstraction layer for application developers. Instead of directly targeting the Win32 APIs, .NET developers will write for the CLR.

And there are the programming languages, Visual Basic.NET, Visual C++.NET and Visual C#.NET, which are used within a single integrated development environment called Visual Studio.NET. These new languages and the IDE are superficially like the older versions of those languages, except support for the .NET Framework is built into the IDE, and that the languages create applications that run atop the CLR, rather than raw Windows services.

In some ways, the release of these three components is an anticlimax, as betas of the .NET Framework, the CLR and Visual Studio.NET have been widely available for many months. Many Windows developers are already intimately familiar with Microsoft's latest offerings, and are already building applications that use or require .NET (see the Special Report on Microsoft .NET, starting on page 18).

On the other hand, the final release represents the moment of truth. Microsoft has been gaining a great deal of publicity and exposure, thanks to the betas; the company was free to tout its vision, but because the software wasn't yet finished, developers found it hard to be critical. There were bugs, there were weaknesses—but that's ok, they said, it's just a beta.

Now the software is here. Enterprise developers will soon have the final binaries, and can test whether their preliminary creations will work. Equally important, third-party tool developers can lock down their own offerings. Competitors also finally have something solid to critique and sell against.

Microsoft has fared well during the extended run-up to the release of .NET, with mainly favorable publicity and continuous news coverage due to the release of beta after beta at conference after conference. The company also has had time to explain what Web services are and why development managers should care about them, and to make believers not only of its customers, but also of competitors, who now have their own Web services strategies and products.

But now .NET is here. Enough posturing, enough beta testing. It's time for the rubber to hit the road. ■

GUEST VIEW

WEB SERVICES NOW!

In 40 years we have accumulated applications on a wide range of systems, from mainframe-based COBOL applications, to word processing on personal computers, to server-based systems that support Internet applications. One thing about this industry is that we rarely throw anything away—we just build new systems on the newest technologies. That's because the investments are often so large, or the data used in them so valuable, that we must preserve them as we move forward.

For some time, the big push has been to integrate applications and data. Enterprise Application Integration (EAI) promises access to more information, which is essential for providing more useful information, and offering our customers better answers to business-critical questions. If customers can determine available inventory before placing an order, they may be more willing to do business with you over one that tells them only after ordering that the parts they need are out of stock.

Now companies are moving applications beyond the firewall for business process integration with partners, temporarily (for a new or ongoing business partnership) or permanently (for mergers or acquisitions). Time is everything in such mergers; whereas it used to take months or years to accomplish integration between partners or new business units, we need a way to reduce the time to days or weeks.

Aside from time, there is cost. If a banking transaction costs \$1 with a human teller, and 10 cents at an ATM, Internet transactions cost 1 cent. Automating business processes with Web services reduces the cost of doing business in the same way, by streamlining existing business partner relationships over traditional communication mechanisms.

Web services enable companies to modernize and extend the life of their existing systems, reducing costs, speeding integration and providing better flexibility and agility. That's why Web services technologies are so hot right now. Because Web services technologies are built on top of the XML standard, they extend the universal data representation—one that can be

accessed in any programming language, on any operating system, regardless of the computer hardware or processor type—to include controlling the execution of business functions.

One reason we tend to hold onto our existing business application systems is that they

are vital to keeping the business running. Fortunately, Web services can be built as a layer on top of existing systems, so that companies can continue to use them as before. This also extends their power greatly by exposing functions with a new, universal access protocol, providing access from any other kind of system.

Web services technologies are well defined by way of a series of specifications that have become de facto standards in the industry. The next step, true standardization, is well under way. So what's keeping you from using Web services?

Many vendors are on board the Web services train with middleware and platforms that support the three essential technologies needed for Web services development: SOAP (a simple protocol for exchanging application messages represented as XML content), WSDL (a vocabulary used to describe all required operational details needed for integration), and UDDI (an electronic Yellow Pages for publishing and finding the available Web services, both for external use in a public Internet, and for private use inside the enterprise).

Web services technology seems to be catching on even faster than XML did. It's a major subject at most e-business conferences and journals. For developers, it's not a matter of "if" or even "when" it will catch on, as many are already developing Web services capabilities, and some are already realizing cost savings in doing so.

A common focus for business partnerships is to improve integration with existing business partners using SOAP messaging, thus substantially reducing the cost of doing business. Traditional means of exchanging business information, such as the telephone, fax or monthly printed computer reports that are re-entered by the business partner,

are being replaced by business partner automation based on SOAP and XML. Such automation reduces the staffing requirements for clerks who formerly did this boring and error-prone work, giving these people an opportunity to do more interesting work in the company.

Key to speeding up the integration process is having computer-readable descriptions of all integration details. WSDL descriptions drive a new breed of application assembly tools that use the information to automatically generate the required "plumbing" code, eliminating complex debugging of code that creates communication between systems, and making Web services integration seem like local object programming.

Web services speed the task of integration, thus reducing the cost of the work. With cheaper integration, you gain tremendous flexibility in revising your business systems. When applied to EAI, this allows companies to experiment with new business processes, and for B-to-B they can integrate quickly with new business partners to jump on an emerging opportunity. Obviously, companies that are investing in Web services now have a huge advantage over their competition that has had to fit their business model to the software, rather than the other way around.

In a time of economic slowdown, investing in new business ventures may be more risky, but you can still become more profitable by improving the way you work, and reducing the cost of doing business. That's why now is an ideal time to get started with Web services. Start with a limited pilot study for a small piece of your business, just to prove to yourself and to upper management that the benefits are real.

Web services are moving very quickly because they are a good idea, and demand for extending EAI to B-to-B is high. The tools and technologies are available now to get started with Web services. Many companies are already using them and saving money now. And now is the time for you to get started on the path to faster integration and improved efficiency with Web services. ■



MARK
COLAN

Mark Colan is IBM Corp.'s lead e-business technology evangelist.

LETTERS TO THE EDITOR

DEVELOPERS CAN CHOOSE TO STICK TO STANDARDS

As a technical manager who makes infrastructure decisions for a number of clients, I need to make a complaint regarding the message, tone and questionable purpose of the article "Has J2EE Hit a Fork in the Road?" [Jan. 1, page 1, or online at www.sdtimes.com/news/045/story1.htm]. The writer implies the decisions that IBM and BEA make with their platform means that Java is somehow doomed, and that "Java has to start delivering on the promises if it wants to succeed," as if Java were some person that makes and breaks promises.

Here is why I disagree with the writer's viewpoint on the decisions of BEA, IBM, Oracle and others. Standards for J2EE are set by the Java Community Process, which sets the base that application-server makers need to heed if they are to be "Java Certified." After that, companies are free to choose and create APIs and extensions that will allow tight integration with their other products.

In the case of IBM, they have a huge number of products that customers want and need to have WebSphere integrated with. Will the JCP oversee those APIs? Not likely. Will Oracle help IBM create these APIs? Remember, these are competitors you are talking about.

So what is the point? "Write once, run anywhere" is a moot point in cases like that. If you want true WORA, certainly you cannot integrate with other products, because they never were created with WORA in mind! I may be forgetful, but did "Java's promise" include all of the frameworks and platforms that are outside of the Java realm?

So where does WORA fit? When developing applications, simply make a demarcation between components that are "plain-vanilla" J2EE, and the components that are using proprietary APIs. But again, is that necessary? Is WORA a high-priority item in my purchasing decision?

Not really. Software development, in itself, is not WORA. That's why it's called *software*. It's not like building a bridge, where it's done once and then it's over. Constant changes to user and business requirements make developers write again and again, and that's an issue

with methodology, not programming languages.

One note about a quote by Will Zachmann: "They are definitely not getting adequate performance with entity beans, nor reusability, rapid development or total platform independence. The actual ability to take a complex application from one J2EE application server vendor's product to another is just not happening."

Is that a problem of the language, or of the habits and practices of the architect? Face it: Bad coding can be the biggest culprit to WORA not happening. And it usually is.

To sum up, I think the article was about a lot of non-issues. What could possibly have been the purpose of the article, except to steer a new development manager away from J2EE as a possible solution?

Jamison Kelly

Information Systems Manager
Johnson Grossfield Inc.

[Just as there are differences among vendors,] there are also too many different developments in the Open Community (e.g. SourceForge) where people just develop the wheel again instead of reusing even existing standards (guess most of them actually plan to "close" their solution and sell it once it gains a certain base, like Enhydra did).

I guess if the "open" guys cannot find a way to work together on a few strong standard frameworks (like Linux or Apache showed) then nobody can blame the "old" closed proprietary vendors if they do the same in their frameworks.

Werner Keil

President/CEO
surveycom.com

Frankly, this article seems to be very misleading, starting from the line "No one has ever really believed in the 'write once, run anywhere' credo." Whoever wrote that probably has little memory of the IT world before Java. The idea of porting an application from one environment to another was next to impossible. The reality of selling "cross-platform" software meant maintaining entirely separate codebases for each platform supported.

Today, there are thousands of companies selling software, written in Java, that is truly cross-platform. It can be execut-

ed in any environment with a JVM, while maintaining a single codebase for maintenance and enhancements. WebLogic Server, is one such cross-platform Java application. WebLogic also has more than 1,000 ISV partners with products that integrate with WebLogic Server or are J2EE compliant. Some of these partners also integrate their products with IBM, iPlanet, Oracle, etc., and while, in some cases, they may be required to produce different versions for each platform, the changes between platforms are generally very minor.

Part of the frustration still being seen in migrating applications is that applications written two or three years ago for Netscape App Server 4.0 or Net-Dynamics or some other non-J2EE app server generally use a component model difficult to translate into J2EE, often requiring extensive rewriting. As these non-J2EE applications slowly disappear in favor of J2EE applications, customers will begin to see much more ease in migrating from one platform to another.

The other critical aspect to keep in mind is that J2EE is still evolving, and not all J2EE app servers support the same versions of all the standards. The application may need to be modified to take advantage of the strong points of a particular app server (or more often to avoid the weak points). Additionally, J2EE will never encompass everything that can be standardized in application development. The JCP does a good job of advancing the standards. It is by definition slower than the individual J2EE app server providers, meaning each new standard is replacing proprietary solutions developed in the absence of a standard. Why should this be thought of as a problem? Each version of WebLogic Server contains technologies deprecated as new J2EE standards were defined.

The analysts have been predicting for over a year that the J2EE app server will soon be a commodity. The J2EE vendors are working hard to ensure that J2EE remains the ubiquitous component model for application development, just as SQL is the standard interface for database access. However, just because a vendor supports the execution of JSPs, servlets and EJBs doesn't automatically ensure performance of each of these components, nor does it

imply stability, scalability, reliability, maintainability or extensibility. What it does imply is that the application should be relatively easy to migrate, should the need arise.

Customers looking to migrate to WebLogic should feel that their J2EE components and J2EE components purchases from third parties will all run and be supported on the WebLogic platform. Cajun, as a development framework, is not focused on differentiating WebLogic Server from other J2EE app servers, but on evolving J2EE and J2EE Web services to make them more accessible to non-J2EE programmers.

I hope that your publication will rescind the message that "the promise of Java is now dead." Not only is it not true, I think it's safe to say that the Java community (developers, ISVs, etc.) is as strong as ever.

Monte Kluempner
BEA Systems Iberia

Very valuable article.

I'm doing a thesis comparing J2EE application servers (BEA as market leader versus JBoss as leading open-source solution). I've used the ECperf benchmark as a reference application. Although it is developed under the JCP, it was still quite

► continued on page 25

CORRECTIONS

Borland Software Corp.'s Inter-Base database version 6.5 is not available in open source. The open-source version is 6.0. The version number was incorrectly stated in a story in the Jan. 1 issue.

Borland added the IBConsole database front end to Inter-Base in version 6.0. The version was also incorrectly stated in the same story. Borland said it is developing a version of IBConsole that runs on Linux, but that it has not been tested.

Apple Computer Inc.'s Carbon is a set of programming interfaces included with Mac OS X that were derived from earlier Mac OS APIs and permit legacy applications to run under Mac OS X. In a story in the Jan. 15 issue, Carbon was incorrectly identified as an emulation environment.

Letters to SD Times must include the writer's name, company affiliation and contact information. Letters become the property of BZ Media and may be edited. Send to feedback@bzmedia.com, or fax to 516-922-1822. Please mark all correspondence as Letters to the Editor.

SD Times

Software Development Times
February 1, 2002 - Issue No. 047

Publisher

Ted Bahr
516-922-2101 x101 • ted@bzmedia.com

Editor-in-Chief

Alan Zeichick
650-359-4763 • alan@bzmedia.com

Executive Editor

David Rubinstein
516-922-2101 x105 • drubinstein@bzmedia.com

Senior News Editor

Edward J. Correia
516-922-2101 x100 • ecorreia@bzmedia.com

Assistant News Editor

Christina M. Purpi
516-922-2101 x111 • cpurpi@bzmedia.com

Copy Chief

Patricia Sarica
516-922-2101 x106 • psarica@bzmedia.com

Art Director

Mara Leonardi
516-922-2101 x109 • mleonardi@bzmedia.com

Columnists

Andrew Binstock
abinstock@pacificdataworks.com

Wayne Rash
wrash@mindspring.com

Oliver Rist
orist@mindspring.com

Steven J. Vaughan-Nichols
sjvn@vna1.com

Contributing Writers

Alyson Behr
alyson@behrcomm.com

Jennifer de Jong
jdejong@vermontel.net

Lisa Morgan
lisamorgan@mindspring.com

Advertising Sales Representatives

Southwest U.S.

Julie Fountain
831-476-1716 • jfountain@bzmedia.com

Northeast/North Central U.S./Canada

Northwest U.S./Canada

David Karp
516-922-5253 • dkarp@bzmedia.com

Southeast U.S./Europe

Paula F. Miller
925-831-3803 • pmiller@bzmedia.com

Director of Circulation & Manufacturing

Rebecca Pappas

516-922-1818 • rpappas@bzmedia.com

Circulation Assistant

Phyllis Oakes

516-922-2287 • poakes@bzmedia.com

Office Manager/Marketing

Cathy Zimmermann

516-922-2101 x108 • czimmermann@bzmedia.com

Customer Service/Subscriptions

866-254-0110 • service@bzmedia.com

Bookkeeping Services

Ken Hafner • Kiwi Partners Inc.
khafner@kiwipartners.com

Article Reprints

Reprint Management Services

Nicole Schneider

717-399-1900 x154 • nschneider@rmsreprints.com



BZ Media

BZ Media LLC

2 East Main Street

Oyster Bay, NY 11771

516-922-2101 • fax 516-922-1822

www.bzmedia.com • info@bzmedia.com

President

Ted Bahr

Executive Vice President

Alan Zeichick



The Parson's chameleon, *Chameleo parsonii*, is an extraordinarily reliable hunter that targets its prey, then precisely shoots its tongue full length—in a fraction of a second—to capture its next meal.

He's not always this reliable.

We are.

Worried about using Web Services to reliably transport business-critical information?

You should be—but not if you rely on SonicXQ™.

SonicXQ is the next-generation messaging Web services platform for service-based applications from Sonic Software. SonicXQ is built on the industry's number one JMS E-Business Messaging Server, SonicMQ®, and it incorporates XML, SOAP, WSDL, JCA, and JMS, leveraging industry standards to solve tomorrow's distributed application challenges. Plus, SonicXQ delivers seamless interoperability and massive scalability required by today's e-business applications—whether you are within the enterprise or beyond the firewall.

For more information or to request an evaluation copy of SonicXQ, please go to www.sonicsoftware.com/sdt and register today!

sonic
SOFTWARE™
Backbone of the Extended Enterprise

FROM BLUESTONE TO HP-AS

Late last year, Hewlett-Packard announced it would begin offering its implementation of J2EE for free. That's right, a complete commercial implementation for free. This is the same product HP spent millions buying in January 2001 in its acquisition of New Jersey-based Bluestone Software.

Mean-spirited wags at large philanthropic organizations might be inclined to point to this acquisition as proof HP cannot properly manage acquired products. However, in this case, such a view is somewhat in error. To be viewed as a credible vendor of enterprise-scale software, HP needed to have a J2EE implementation of its own—after all, its two biggest competitors are IBM and Sun. And with independent Bluestone selling a highly regarded app server, the acquisition made considerable sense.

Twelve months later, because all the major vendors have a J2EE product to sell, J2EE per se is increasingly viewed as no big deal. It's an implementation of APIs—a mere platform on which you do something, but nothing more. As a result, it made perfect sense for HP to pre-empt its competitors by making the product free. The hope, I believe, is to after-sell individual add-ons that run only on Bluestone. In many ways, this is

increasingly the direction in which the industry is moving. Vendor differentiation and profits will come through the established gateway of proprietary extensions. With the industry heading in this direction, HP got the jump on its competitors and trod the path first.

Interestingly, it's not clear whether other major vendors will follow. BEA has no interest in doing this, as the company is still searching to define what interesting proprietary extensions to offer. IBM, of course, has a wealth of them, and will likely use them to beat down BEA and surpass the latter's market share sometime this year. IBM has no need to give up the revenue stream from J2EE at present. If it's important to do so later, undoubtedly it will offer a free version, but not until then. iPlanet and Oracle are question marks and may feel themselves much more threatened by HP's move—iPlanet especially, since it is already facing Oracle's aggressive promotion of 9iAS. And since iPlanet offers a completely integrated line of servers, of which its J2EE is just one part, a free version of the app server might well prime its fortunes without excessive cost.

The actual product is HP Application

MIDDLEWARE WATCH



ANDREW BINSTOCK

Server 8.0 (HP-AS 8). It can be downloaded from www.bluestone.com, or ordered in CD-ROM format. In either case, a key is e-mailed to you to complete the installation. The CD-ROM version has the benefit of a multimedia package that provides detailed presentations on many aspects of HP-AS: everything from how to start it up, to how to use some of its more esoteric features. For these tutorials alone, I suggest going the route of the CD-ROM.

The free HP-AS package is much more than a minimal product. It includes middleware technologies that HP licensed from third parties. It is currently the cheapest way, for example, of getting your hands on Sonic Software's SonicMQ implementation of JMS. Likewise, it includes Iona's Orbix implementation of CORBA, which at one time was regarded as one of the most comprehensive versions available.

In addition, HP-AS includes products from WebGain and Merant as well as three open-source tools: Apache's Xerces XML parser, the Xalan XSLT API and the HypersonicSQL Database engine (HSQLDB), which is a small-footprint database, written entirely in Java, that supports a substantial subset of SQL-92.

HP also provides development and deployment tools (the former, lightly;

which are not standard compliant, and if I have to use them, I simply steer away from the proprietary code they make it seem like I have to use.

Since you're referring to enterprise-class applications, how about comparing moving those to the way you had to move and install applications in the same class written in other languages, and let's see if Java doesn't keep its promise of cross-platform compatibility?

How about the fact that Java makes programming far easier to deal with than C, C++ and many other languages?

Robert S. Stieir
Senior Software Architect
K&S Engineering

Any extension a vendor provides is not J2EE. That is the promise of Java, and it is quite alive and well!

Nathan Phelps

HOW OPEN IS NETBEANS?

Regarding your article ["Sun Slams IBM for Eclipse," Jan. 1, page 1, or online at www.sdtimes.com/news/045/story2.htm], IBM could not stand in the background while Sun was integrating NetBeans/Forte for the iPlanet server. Is Sun willing to promote the same type of integration for WebSphere? If not, then just how open source is NetBeans?

William Odefey

Good job! This story provided some needed insight into the NetBeans/Eclipse issues. I currently use NetBeans and was thinking about downloading Eclipse. This story and the list of Linux companies in bed with IBM were very eye-opening.

I have been trying to follow IBM's moves in the Linux area, and this looks like a strategic move by IBM to rally the Linux community to focus their efforts versus Microsoft. This would be in regard to a uniform development tool for Linux!

It's clear IBM is going for some of the Microsoft market for desktop seats. Eclipse may be the first of many salvos IBM fires at Microsoft this year—Microsoft is target No. 1; Sun is not their current main focus.

I would not be surprised to see IBM

the latter in some depth) and it bundles a commendably complete set of manuals in PDF format for users, administrators and developers. This is indeed a complete implementation of J2EE 1.2 with many bonus features thrown in, including high-quality commercial components and customized open-source elements.

It's been a while since I have seen such a large-scale product offered for free. I think most sites should get a copy—if not for their own deployment, then certainly to have in their possession another benchmark commercial J2EE implementation by which to test code and compare with their current implementations.

The release of HP-AS as a free product will shake up the highly dynamic Java app server market once again. If HP can find an effective way to leverage the distribution of this product, it will be in a position to aggressively take market share from its competitors. But first, as one reader mentioned to me, it will have to renegotiate pricing on HP-AS with sites that have recently bought the product at its previous full price. One presumes HP will show great flexibility in these negotiations in view of the gambit it has just launched. ■

Andrew Binstock is the principal analyst at Pacific Data Works LLC.

LETTERS

◀ continued from page 23

difficult to get it running on both WebLogic and JBoss. I guess one of my conclusions will be the conclusion you suggest in the article: There is no WORA yet.

Pieter Van Gorp

How convenient to quote and note trends from a big application vendor whose sole purpose is to try to conquer the market at all costs. BEA is nothing but a big bloated company that just buys other technologies and complicates developer lives when they try to integrate everything together.

Ever try to install WebLogic by itself without anything else? Don't you find it surprising that a great product like Symantec's VisualCafé went limp when BEA took it over? Fact is that you picked the Microsoft of Java companies to make a sweeping statement of Java.

Instead of spending time making developers' lives easier, at least according to how they perceive *easy*, why doesn't BEA spend time making its products compliant?

The reason why people write their own work-arounds to issues is simply because application vendors like BEA make them so complicated in the first place.

I have many applications that I move from one server to the next with very little pain, and that's because as a developer, I refuse to use application servers

which are not standard compliant, and if I have to use them, I simply steer away from the proprietary code they make it seem like I have to use.

Since you're referring to enterprise-class applications, how about comparing moving those to the way you had to move and install applications in the same class written in other languages?

Robert S. Stieir
Senior Software Architect
K&S Engineering

J2EE is stronger than ever and has always been about a standard set of compatible APIs as well as proprietary features that provide value-added features. I don't have any issues at all with BEA or Oracle or Sybase or anyone implementing all sorts of proprietary features in their J2EE application server as long as they can pass Sun's compatibility test.

If I, as a developer, use a proprietary API, then I know I'm stuck with the particular vendor—I choose the path. If portability is important to me, then I don't use the proprietary extensions...it's that easy.

Comparing J2EE to Microsoft's vendor lock-in is ridiculous—with Microsoft I'm always using proprietary APIs; with J2EE I'm always using standard APIs.

hardware with Linux displacing Sun and Solaris in development shops this year. The [IBM] Thomas J. Watson Research Center has some heavy hitters writing code for Linux, and I would not be surprised if Eclipse's main targets are VB and VC++ developers for desktop applications.

Steven L. Collins
Consultant

I read Sun's response to IBM's new open-source project, Eclipse, as that of a jilted suitor. Sun is hurt and embarrassed that someone might be stealing their thunder in the open-source Java tool market. I agree it is disingenuous of IBM to not invite Sun, but I believe the Eclipse project was well on its way before IBM decided to make it open source. Judging from Sun's response, IBM was justified to leave them out.

Sun should have held its tongue, praising IBM for joining the open-source movement and offering to work with them to make NetBeans and Eclipse plug-in compatible. It's not like there weren't other open-source Java development tools available or in the pipeline anyway.

I believe the issue is that Sun has taken offense to IBM charging forward with their Java efforts. After all, IBM's compiler, Jikes, is faster and produces tighter code, their VM is better, and now they're going to develop a product that's better than NetBeans. Oh, the humanity!

Doug Schwartz



JavaOneSM

Sun's 2002 Worldwide Java Developer Conference

Register Today!

March 25-29, 2002

Moscone Center
San Francisco, CA

JavaOne® Pavilion
March 25-28, 2002

To register go to
<http://java.sun.com/javaone/>
or call **888-886-8769**.

Outside the U.S.,
call 781-433-1509.

Use Priority Code SDMG
and Coupon Code 274.

BEYOND BOUNDARIES

Experience the power of
Java™ technology, the
universal services platform.

Learn how Java™ technology is driving the advances in service delivery,
redefining the enterprise, and creating new wireless and consumer
possibilities. Join leading developers and technology strategists for a
full week of in-depth Java technology education and cutting-edge
developments from Sun Microsystems, Inc. and other industry leaders.
Discover the freedom to innovate at the JavaOne conference.

Go beyond the boundaries of your knowledge.

Sponsored by



<http://java.sun.com/javaone/>

Copyright © 2002 Key3Media Events, Inc. All rights reserved. Sun, Sun Microsystems, the Sun logo, Java, The Java Coffe Cup logo, Java Community Process, JavaOne, the JavaOne logo, Java Developer Conference, Java 2 Embedded Java, PersonalJava, 100% Pure Java, J2EE, J2ME, J2SE, Java, JavaBeans, Forte, Planet, White Paper, Hot Anywhere, and all Java-based marks and logos are trademarks or registered trademarks of Sun Microsystems, Inc. in the United States and other countries. Key3Media and Key3Media Events are trademarks or registered trademarks of Key3Media Events, Inc. in the U.S. and other countries. Produced by Key3Media, Inc. Sponsored by Sun Microsystems, Inc.

Produced by



PLAYING GAMES WITH J2EE

It's a problem as old as programming. Do you stick with the straight and true of the established standard, or do you use proprietary extensions in your coding?

Now, it looks like we're facing this issue yet again in J2EE programming. As reported in the Jan. 1 issue of SD Times ("Has J2EE Hit a Fork in the Road?" page 1), BEA Systems' upcoming application framework, "Cajun," will work only with BEA's WebLogic application server. In addition, IBM will be adding proprietary JavaBeans to an upcoming enterprise edition of its WebSphere 4.0 Java application server, and Oracle is tying its Oracle9iAS tightly to its DBMS and adding extensions to it.

In the story, some industry figures and analysts expressed concern that these proprietary extensions could block Java acceptance and might eventually lead to J2EE or even Java forking into incompatible versions.

Really? Does anyone seriously think that Java is "write once, run everywhere" anymore? I know the marketing people still mouth that platitude, but does anyone who actually programs in Java believe it? Philips DesAutels, Microsoft's project manager for XML Web Services, told me that "Java is write once, edit a thousand times." Of course, he has his own axe to

grind, but we all know that he's right.

What he misses, though, is that Java does give you a solid foundation for your programming. Sure, you'll need to edit your code from platform to platform, but at least you don't have to rewrite it the way you do with C or C++.

And what's this about Java losing mind share? What's going to replace it? C#, a language still emerging from its infancy? I think not. Besides even with C#'s ECMA approval, it's still just another product that locks you into Microsoft's programming suite.

You see, with Java, as with most languages, you have a choice. You can either stay in the mainstream or try the proprietary offshoot. It's not like C#, where if Microsoft wants to make a change, you have no choice but to use it.

Let's get practical: Which way should you go?

For starters, I think you have to look at exactly what each set of proprietary changes actually offers you. And, by this, I don't mean what they promise you for future benefits. I mean what these new production J2EEs, once they're in your hands, will actually deliver for your development efforts. If all they do is

offer you a slightly better way to handle garbage collection or make it easier to work with a particular DBMS version, I say forget it. It's not worth it.

OK, let's presume that there is a real advantage for your work. Should you switch? Maybe yes, maybe no.

There are arguments both ways. If you stick with the straight and narrow view of Java or J2EE, your code will be much easier to maintain, and it will be simpler to find new programmers to keep your programs running. That is not a small matter.

Of course, if you are absolutely certain that you'll always be working with Oracle9iAS, WebLogic or WebSphere and their proprietary changes actually benefit your work, you should go for it. Just keep in mind that proprietary extensions can come and go but the base languages tend to remain the same.

Over the years I've gone both ways. Back in the days when dinosaurs walked the earth and people programmed in the xBase languages, I faced a similar situation with "pure" Ashton-Tate dBase, Clipper and FoxPro. I finally chose to standardize on the FoxPro variant—a wise move since that's the one xBase language that's still a going concern.

I can't think of any way to determine if any complete solution from BEA, IBM or

Oracle, encompassing J2EE app server, middleware, database and tool set, is better than any of the others. Really, that's what this is all about. The real answer depends on what you want to do, your level of expertise with a particular environment, and what your customer wants. And, of course, none of this trio of companies is going out of business anytime soon.

So, when you get down to it, this really isn't a potential battle over forking. It's a conflict among software vendors trying to differentiate their enterprise application lines.

Enterprise computing is already tough enough without mixing in these red-herring issues. Computing at this level may not be rocket science, but it's more than close enough. This is hard stuff. I don't know many software managers or developers who can do an equally good job with both WebSphere and DB2 and Oracle8iAS and Oracle9iDB? Do you?

Frankly, I wish the vendors would focus on getting their Web services tools polished up and leave playing games with Java for another day. There are already enough important differences between the J2EE implementations without this nonsense. ■

Steven J. Vaughan-Nichols has been writing about technology for more than 15 years and also has worked as a programmer for NASA and the Dept. of Defense.



STEVEN J.
VAUGHAN-NICHOLS

{ Linking your worlds with the greatest of ease }

TopLink™

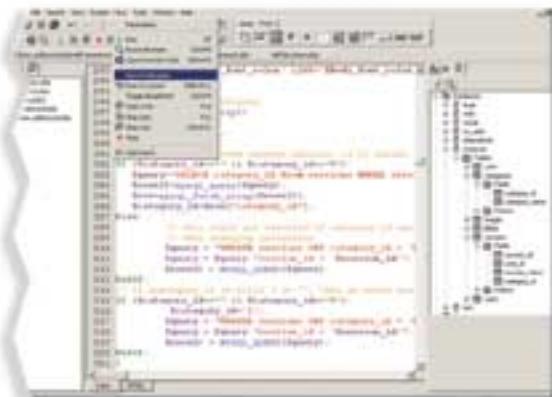
Flexibility • Productivity • Performance

Database

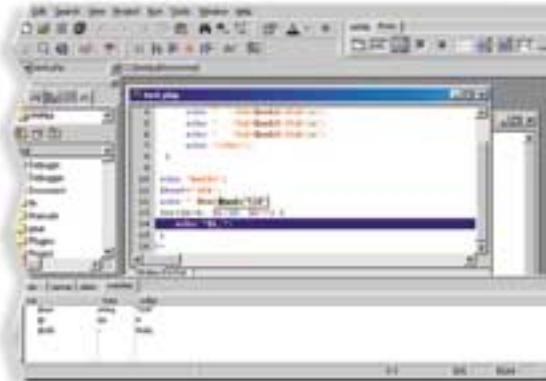
For more information
Call 1.877.WebGain Ext.15858
Visit www.webgain.com/toplink_ROI2.html

© 2001 WebGain, Inc. WebGain, the WebGain logo, TopLink, and other WebGain products named are registered trademarks and service marks or trademarks and service marks of WebGain, Inc. in the U.S. and other countries. Java and all Java-based acronyms and logos are trademarks or registered trademarks of Sun Microsystems, Inc. in the U.S. and other countries.

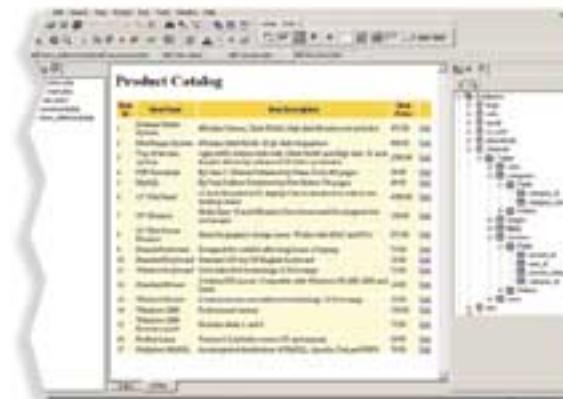
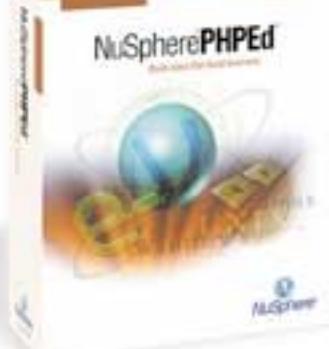
webGAIN™



Design.



Debug.



Deploy.

PHP lets you create interactive web pages that wow people. Now build those pages faster than ever with the integrated development environment for PHP – NuSphere PHPEd.

Imagine a built-in debugger that spiders through code, watching variables as statements are executed. With NuSphere PHPEd, you'll write code, debug it, preview it and deploy it, all from one place. You'll speed up development time.

It's time to celebrate. Because award-winning NuSphere PHPEd gives you color-coding, code completion, context sensitive debugging, remote deployment and much more.

Now you can have everything you've always wanted for PHP. So get ready to build sites that build business.



For more information or to learn about our special offers,
go to www.nusphere.com/na/phped_sdt

PINOCHLE ON YOUR SNOUT

Those of us of a certain age remember the above phrase as being part of a ditty about worms. We've all been thinking a lot about worms lately, what with the onslaught of Windows-oriented malicious code. In fact, it's likely that portions of your development budget have been siphoned off to pay for fixes to your Windows servers and to Internet Information Server. And those fixes meant at least some downtime while updates were installed.

Wouldn't it be nice to find a Web server platform that's fast, scalable and, best of all, unaffected by all those worms? As it turns out, there are several better choices than Windows when it comes to those criteria, but none of them are choices that should be taken lightly.

The first choices for a different platform that usually come to mind are the various flavors of Linux and Unix. These products are stable and robust, and while there are some Linux and Unix worms out there, there aren't many and the solutions exist. Some of these operating systems, such as AIX and Solaris, are proprietary and expensive. On the other hand, they're very well supported and extremely reliable. Support is more of a challenge with Linux, since there's

no manufacturer as such behind it, but it, too, is very reliable. But there are downsides. All of these operating systems require highly skilled administrators that are in very short supply even in these days of layoffs.

But there is an alternative. NetWare. Yes, NetWare.

For the past couple of months, Novell has been suggesting that its venerable network operating system is one of the best choices available for your Web server, now that version 6 is out. Novell executives make a good case. While NetWare has never impressed anyone with being trendy, it's always been solid, reliable and secure. And it's always been fast in its role as a server. Over the years, the NetWare servers I've tested have always outperformed other operating systems.

As it happens, NetWare comes with two Web server packages. One of them, called with great originality "The Novell Web Server," is an outgrowth of the old Netscape server. The other is Apache. Novell is wisely placing its emphasis on the Apache server.

NetWare also includes Apache's open-source SOAP/WSDL server, which

soon will support UDDI. In addition, the server works with Oracle (bundled) and MySQL (soon to be bundled), both of which can reside on the NetWare server.

NetWare 6 is highly scalable, at least in terms of the hardware. A single five-user copy of NetWare can support an unlimited number of Web users (the user limit applies only to users logged on for file and print services). The same five-user copy of NetWare can scale to 32 processors on a single computer, and to as many as 32 clustered servers. That would be one heck of a Web server.

But there's always a downside. Unlike Linux, for example, you do have to pay for NetWare. That five-user version of the operating system will set you back about a thousand dollars. But you only need to buy one for all of those processors and all that clustering.

In addition, despite NetWare's new Web-based administration tools, you will need a trained NetWare administrator. Fortunately, there are many large companies out there that are currently using NetWare for file and print services, so you might already have a NetWare administrator on your staff. And if you don't, finding one is not nearly as hard as finding a Linux or

Unix one. After all, NetWare has been around for decades and changes to the operating system have been evolutionary. While an administrator trained on NetWare 4 or 5 will have to update some skills, it won't be foreign territory.

So what's it like to work with NetWare, or more important, to develop Web pages using NetWare's version of Apache? As it turns out, it's mostly an anticlimax. Of course, all of my efforts at creating Web content are an anticlimax, but that's another story. For developers, it's no different from creating content for any other version of Apache 2.x. If your people can handle that, they can handle it in NetWare.

In addition, all of the things you expect to find in your Web environment are there, too. NetWare now supports LDAP, SSL and JavaBeans. You won't need to retrain your staff.

What NetWare brings to the table that you really want is solid security and a superb directory service, as well as a scalable operating system that's fast and efficient.

I have to admit, I was surprised. While I've worked with NetWare for years, I didn't expect it to be such a solid Web platform. It turns out to be better than I expected. ■

Wayne Rash is a technology journalist and consultant.

INTERNETWORLD: THE OTHER STUFF

Last year's Fall InternetWorld conference is long over, and so far all I've discussed is what Microsoft was showing. If you had hiked a few steps left of that big booth, however, you'd have wound up smack in the middle of the Microsoft Partner Pavilion.

Like the rest of the show, however, the MPP wasn't exactly a hotbed of innovation. But lurking amidst the pile of usual players, there were a few nuggets of potential.

At the top of these is Chutney Technologies with its PreLoader technology. PreLoader is just about the hottest thing I've seen to date for dynamic caching. Dynamic caching basically allows Web pages to be both reusable and personalized to individual users via the creative use of content accelerators.

Chutney breaks this down even further in PreLoader by caching not merely the entire HTML page, but individual logic components on the page. These can then be reassembled for a variety of purposes from a central cache or a cache hierarchy. This opens new doors for Web developers looking to create more personalization for customers without turning performance into a problem. Chutney has built quite a bit of flexibility into PreLoader, including support for multiple caches for specific data types and an interest-

ing hierarchical prioritization scheme that allows specific users or groups priority access. And unlike competitors like Oracle's Edge Side Includes, PreLoader runs in any Web server/application server environment.

Xtremesoft's AppMetrics for Transactions (AMT) also jumped out at me; basically an application management tool for MTS and COM+ -based applications, AMT can also be very useful during the QA phase—something dear to my heart after being nailed yet again by another sloppy security hole in Microsoft's Outlook e-mail client. AMT can plug into Xtremesoft's NetIQ AppManager Console, but can also be run as a stand-alone application. For the most part, it's a flexible benchmark package, but has considerable flexibility and intelligence behind it.

For example, benchmarks can be set to automatically detect and analyze application bottlenecks. This kind of analysis can be aimed not only at the component level, but also at transactions or even methods, and can then be backed up and cross-referenced with data on CPU, memory or page faults per second.

Xtremesoft has further extended AMT with a version specific to Microsoft's BizTalk Server (AppMetrics for

BizTalk, or AMB). This version plugs directly into BizTalk and manages not just the Web service layer of a BizTalk application, but the messaging and Orchestration Server components as well. Similar to AMT, AMB also monitors application performance but adds monitoring and alerting tools specific to BizTalk. For example, AMB allows easy suspension or even termination of a BizTalk process and then allows users to see where the process is in the XLANG schedule or whether there have been problems.

Reporting is also impressive, but be prepared—AMB wants SQL Server 7 or SQL Server 2000 in order to provide full functionality (but then so will most BizTalk application environments). Once you've got that, though, reports are easily accessible via a Web browser and can even be organized in a time-correlated fashion across an entire BizTalk application environment. You can get not only overview-style reports, but impressive drill-down that can cross-correlate everything from scheduling problems to statistics. It's not exciting stuff from a raw development standpoint, but it's sure helpful if you're interested in steady application performance and its required testing.

On the authoring side, InterMedia stood out as a possible future partner for Microsoft's Corona. InterMedia was at the show demonstrating its Live

Control, i-Control and Design Control tools; the suite is meant as a "professional authoring tool for streaming" content, though considering what passes for professional streaming content on the Web these days, that's not exactly saying much. InterMedia does take an all-out approach, however, utilizing Design Control for the layout phase, Live Control for the authoring phase, and i-Control for the management and publishing phases.

You can build content within Live Control or import it from a number of sources, including Flash animations and the ubiquitous PowerPoint slide. Entire Web sites can be incorporated into a streaming layout as well as cooler things, such as live chats. Content can be converted into Real Media, Windows Media or XML formats and can be targeted performance-wise not only toward Web broadcasts, but also intranet broadcasts or even CD/DVD distribution. Not a bad authoring framework at all by today's standards, but if Microsoft isn't kidding about Corona, InterMedia will need to add a number of integration features to keep up in the coming year.

That's just about everything that was interesting at Fall InternetWorld. Let's hope things get better all around in 2002. ■

Oliver Rist is a freelance technology journalist and vice president of technology at AIC Inc.

WEB WATCH



WAYNE RASH

WINDOWS WATCH



OLIVER RIST

SILVERSTREAM LOOKS BEYOND WEB SERVICES

It appears that SilverStream Software Inc. has learned from its past mistakes. Once a leading player in the Java application server space, SilverStream shuffled to the rear of the pack when companies such as BEA, IBM and Oracle saw that the way to gain market share was to extend the offering to complete solutions, which relegated the app server to just so much plumbing.

SilverStream has certainly felt the financial fallout. Fourth-quarter earnings, it is reporting, will be in the \$10 million range, down from \$26 million a year earlier, and the company will lose about 60 cents per share, much higher than the 42 cent target projected by analysts.

Steve Benfield, chief technology officer at SilverStream, said the company had an unusually high number of customers defer projects—either due to the events of Sept. 11, or the stalled economy, or both—so many of its sales are being pushed off into the first quarter. “We’re hearing, ‘We’ve chosen you guys, but we’re being told not to spend any more money this year,’” Benfield said.

By the time customers are ready to spend again, SilverStream will be in position in its new market—Web services platform provider. But instead of resting on its early-mover laurels, as it did in the app server market, it says it is looking beyond what is currently available and being done to be able to provide a next-generation architecture for the creation of Java apps and services.

Benfield expects most major Java vendors to have some sort of Web services offering in the near future, though he said most of it is low level: The act of transferring basic components and adding a Web services wrapper is fairly

ubiquitous at this point. “People have been doing XML over HTTP for years; they just didn’t call it Web services and use SOAP,” he said. “At what point will it become not newsworthy when a vendor says he’s got a Web services offering?”

This year, Benfield said, it is how people manage their Web services that will be the key to success. It is not enough to wrap components for transfer; businesses need to know how to turn mainframe data into Web services, how to assemble applications from Web services components, and how to add personalization to create a better user experience.

Benfield also said business process modeling will become critical in the next few years. SilverStream, he claimed, has adopted the Web Services Flow Language—an XML language being developed by IBM for describing elements in a process flow—and predicts it will become the standard for doing workflow. In fact, he said, the entire business model could be deployed as a Web service.

Ironically, SilverStream sees itself competing with many of the same companies that defeated it in The Great App Server Wars—BEA, IBM, Oracle and Sun. By taking a more forward-looking view of Web services, perhaps SilverStream will capture a larger share of this new market.

MONTAVISTA GROWING STRONGER

Embedded Linux is here to stay. Rather, the belief that embedded Linux is here to stay is here to stay. How else to account for MontaVista Software Inc.’s recent closing of a \$28 million third-round of funding from investors including IBM and Sony?

Perhaps it’s the company’s revenues, in the millions, that showed a 250 percent increase from a year earlier while boasting such flagship accounts as Ericsson, Nokia and Sony? While the company still is not yet profitable, CEO Jim Ready said it is on track to get there in under two years, which he said has been enough to satisfy the investors. Of course, that’s what VA Linux said just before its IPO rang up a cool \$238 million in one day, and it has struggled ever since to find a way to turn a profit, bouncing from hardware to software.

Or maybe it’s because while the Linux market has experienced the same type of consolidation as other markets during the current downturn, MontaVista has managed to gain traction in the embedded space, showing a respectable 250 new design wins in 2001. “It was a tortoise-and-hare thing with Lineo, which raced out to the lead,” Ready said. “But they’ve gotten smaller in the last half-year, and we were putting in place things that would show benefits over time. It takes time for things to shake out.” Better still, perhaps it’s the company’s subscription-based licensing model, which proves it is in fact possible to generate revenue selling free (read: open-source) software.

“Proprietary OS guys would want to say no one seriously uses Linux,” Ready said. “We stuck a stake through the heart of that FUD. Nokia isn’t cavalier about their system software. Linux has become fundamental to embedded systems.”

MontaVista, by the way, is retiring its Hard Hat Linux name, rebranding the product MontaVista Linux, according to Ready, who acknowledged it was difficult to build two distinct brands. It’s just one more reason to believe embedded Linux is here to stay. ■

David Rubinstein is executive editor of SD Times.

INDUSTRY WATCH



DAVID RUBINSTEIN

BUSINESS BRIEFS

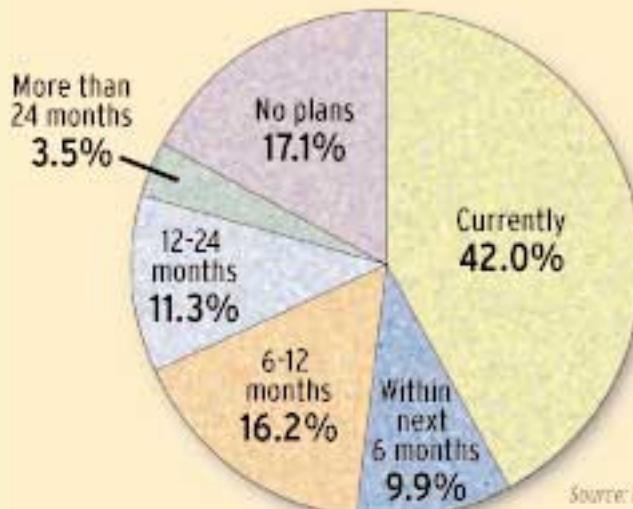
Mirroring what has been seen throughout the high-technology sector, Rational Software Corp. reported third-quarter earnings down 67 percent from a year ago. Rational had \$13.3 million in earnings, or 7 cents per share, for the period ending Dec. 31, 2001, compared with earnings of \$40.2 million, or 20 cents per share, from a year earlier. Revenues also were down. Rational generated \$170.2 million for the quarter; a year earlier, revenues were \$215.5 million . . . Perficient Inc., a company specializing in support for IBM Corp.’s WebSphere platform, has secured \$7.9 million in equity and debt financing. The company will use the money to continue its aggressive acquisition program; in February 2000, Perficient acquired Compete Inc., which provided deployment, integration and training services around WebSphere . . . Java and Web services training and consulting firms The Middleware Co. and CustomWare are merging their operations under The Middleware Co. name. Ed Roman will become CEO, while Salil Deshpande, formerly of CustomWare, will be president. ■



CALENDAR OF EVENTS

Embedded Executive Summit	Feb. 3-6
Half Moon Bay, Calif.	
CMP MEDIA LLC	
www.esconline.com/exec	
Wall Street on Java Technology	Feb. 4-5
New York	
LIGHTHOUSE PARTNERS INC. & FLAGG MANAGEMENT INC.	
www.javaonwallstreet.com	
Python Conference	Feb. 4-7
Alexandria, Va.	
FORETEC SEMINARS	
www.python10.org	
PalmSource Conference & Expo	Feb. 5-8
San Jose, Calif.	
PALM INC.	
www.palmsource.com	
Software Management & Applications of Software Measurement	Feb. 11-15
Anaheim, Calif.	
SOFTWARE QUALITY ENGINEERING	
www.sqe.com	
VBITS/VSLive	Feb. 11-16
San Francisco	
FAWCETTE TECHNICAL PUBLICATIONS	
www.vslive.com/2002/sf	
Internet World Wireless East & Pocket PC New York	Feb. 20-22
New York	
PENTON MEDIA INC.	
www.internetworld.com/events/weast2002	
BEA eWorld	Feb. 24-27
San Diego	
BEA SYSTEMS INC.	
www.beasys.com/events/eworld/2002/sandiego	
CT Expo	March 4-6
Los Angeles	
CMP MEDIA LLC	
www.ctexpo.com/ctx	

When Do You Expect to Develop Web Services-Enabled Applications?



Source: Enterprise Development Management Issues, Winter 2001, ©Evans Data Corp.
www.evansdata.com

EVANS DATA WATCH

A year ago, almost nobody had heard the phrase “Web services,” but by the end of 2001, nearly every vendor had unveiled its Web services strategy, and many had launched tools, servers, services or other initiatives aimed at helping developers shift to the new paradigm.

Have enterprise development managers latched onto Web services? According to a winter 2001 survey, they have, with 42 percent of respondents indicating that they are currently involved in developing Web services-enabled applications. Another 26 percent say that they expect to develop such applications over the next 12 months, and about 15 percent say they may do so further in the future. Only one out of six respondents—17 percent—reported having no plans to build Web services-enabled applications.

Information is subject to change. Send news about upcoming events to events@bzmedia.com.

dice.com

The tech game has changed.
How you **win**, hasn't.



The tech game can change all it wants to, but savvy technology professionals still know how to win with Dice.com. When you **Announce Availability** at Dice, you not only get immediate attention from hiring companies and recruiters, you also become part of an elite community that's all tech. Show change who's the boss. Visit Dice.com today.

dice.com

nobody gets IT like Dice.™

**Perforce Software Configuration Management
is so fast and reliable,**



you'll hardly know it's there.

You need a Software Configuration Management (SCM) tool you can rely on to do its job, so you can do yours. If it makes you wait, or gets in your way, we know you won't use it. That's why Perforce built an SCM tool that always moves as fast as you do. A careful database implementation and slight footprint ensures Perforce can turn around everyday operations in virtually zero time. Discover why over 70,000 developers rely on Perforce all day, every day. There's a free evaluation copy waiting for you. No questions. No forms. No salespeople. Simply download your copy at www.perforce.com.

PERFORCE
S O F T W A R E